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THE FUNCTION OF MICTURITION.[1]

By **Sidney V. Sewell, M.D.,**
Physician, Melbourne Hospital.

It is impossible in the short time allotted to me to do more than briefly to review the experimental work on lower animals, which has been performed to elucidate the function of micturition control. Accordingly I must pass by the work of Gianuzzi and von Zeissl, and go on to the more complete work of Elliott. This observer confirmed the work of former observers, and demonstrated two sets of nerve fibres controlling the act of micturition. The one set of fibres arise in the upper lumbar region of the spinal cord, and pass by way of the hypogastric nerves, and through the inferior mesenteric ganglia to the bladder musculature, and the other arises from the second and third sacral segments, and pass by means of the pelvic nerves to the bladder. Elliott found some variability in different animals, but, for the most part, stimulation of the pelvic nerve with a weak current produced rhythmic contraction of the general bladder musculature, with a gradual summation of effect. When these contractions became sufficiently strong a simultaneous relaxation of the sphincter area and urethra occurred. and the bladder was emptied. A strong current produced a spastic contraction of the general bladder musculature, with simultaneous relaxation of the sphincter and urethra. This work has been more recently confirmed and extended by Barrington.

This observer, working entirely with cats, showed that division of both pelvic nerves was invariably followed by complete retention of urine, which persisted for some time, and was then followed by a voluntary but quite incomplete emptying of the bladder. The animals obviously retained the normal desire to micturate.

Division of both hypogastrics, however, performed either above or below the mesenteric ganglia had comparatively little effect on micturition control. A further experiment of considerable importance was the division of the posterior roots by the sacral segments. This operation invariably resulted in complete retention of urine and a flacid condition of the bladder leading to a more marked increase in bladder volume than with any other experimental lesions. These animals evinced none of the ordinary desire to micturate, thus demonstrating that the affector impulses concerned in the voluntary performance of this act pass in to the central nervous system entirely by way of the sacral segments.

Barrington further investigated the control of micturition by trans-secting the spinal cord partially and completely above and below the origin of the fibres to the hypogastric nerve. The dorsal transsections were followed by a period of complete retention of urine, and when the bladder was overdistended a little urine would occasionally dribble away. After a variable interval this period of complete retention was followed by a period of reflex incontinence, during which variable quantities of urine would be expelled at irregular intervals, with some degree of force, but the bladder was never completely emptied—this being due to the fact that the relaxation of the urethra did not correspond in time to the contraction of the general bladder musculature for a sufficiently long period. Accordingly, Barrington holds that this should not be regarded as in any sense of the word a co-ordinate act of micturition. He was not able to demonstrate any marked differences between transverse lesions above and below the cells of origin of the hypogastric fibres, except that in the latter there was perhaps a greater frequency of micturition. Barrington was further able to confirm the work of Mosso and Pellacani, showing that a partial transsection of the spinal cord leaving the anterior ground bundles intact is followed by exactly the same results as far as the function of micturition is concerned as a lesion of the spinal cord; while a trans-section of the anterior columns alone is not followed by any interference with the control of micturition. How then do these results, obtained experimentally, compare with clinical observations on man? It is not possible for me to bring before you the results of lesions of either the pelvic nerves or the hypogastric nerves, so I will proceed to describe the results of nerve root lesions. As you will observe in the case which I now present to you, there is complete loss of sensation over the skin areas supplied by the 2nd, 3rd, and 4th sacral segments, and an almost complete loss over that supplied by the 1st sacral segment. Fifteen years ago this patient was pinned to the ground by a falling tree while leaning forward in the sitting posture. There is marked anterior displacement of the lower lumbar vertebræ, and since the accident this patient has not on any occasion voluntarily passed his water. There is still complete retention, the patient regularly passing a catheter to remove the urine Soon after his accident this patient's bladder unfortunately became infected, and he assures me that at that time the bladder would readily hold more than a quart before any distension discomfort was produced. The discomfort produced by a full bladder was not and is not associated with any desire to micturate, but consisted in a feeling of pain in the anterior abdomen, probably due to a stretching of the parietal peritoneum. The results of this lesion correspond then very accurately with those obtained by Barrington experimentally, but in this case there is almost certainly complete division of the corresponding anterior roots also, and accordingly the ability to carry out the act of coitus is also wanting.

[1] Delivered before the Physiological Section of the British Association, Melbourne, August, 1914.

I have had one similar case, and since the symptoms were identical I will not burden you with any description.

A somewhat similar condition of retention occurs in cases of tabes dorsalis, where the primary protoneurons of the proprioceptive system of these sacral segments are degenerated.

I have only been able to observe one case of involvement of the 2nd, 3rd, and 4th lumbar roots, and in this case the involvement was due to a secondary sarcomatous deposit, involving the *dura mater*, and before any prolonged series of observations could be made a large hæmorrhage occurred into the tumour, and the pressure on the *cauda equina* thus produced brought about complete retention of urine, owing to the pressure involvement of the roots subserving the detrusor mechanism. However, during the short time when this patient was under observation before the hæmorrhage occurred, while no involvement of the sacral distribution could be detected a marked frequency of micturition was present, and the patient informed me that this had been so for some few weeks before she came under observation. I may state that there was no associated cystitis present. If a single observation is of any value, it would seem that in human beings at least partial or complete removal of the inhibitory effect of the hypogastric impulses leads to a preponderating flow of impulses by way of the pelvic nerves (sacral segments), and in this way the bladder becomes contracted, and since its cubical content is less pressure readily rises, and micturition is more frequent.

In a number of cases of transverse lesion of the spinal cord above the dorsal region the following signs and symptoms were present. For a variable period of two to four weeks complete retention of urine was present, and the bladder was more capacious than normal. Following on this a condition of flow incontinence appeared with contracted bladder. In these cases the bladder always contains a small quantity of fluid, and would seem never to be completely emptied; during this stage it was impossible to induce the bladder to hold more than from two to five ounces of fluid, even when that fluid was delivered from a considerable height. It may be added that during the period of flow incontinence, the somatic musculature below the level of the lesion was completely flacid, and all reflexes were abolished, except in one of the cases where, curiously enough, a flexor type of plantar reflex still persisted on one side only. This was the only manifestation that the transverse lesion was not absolutely complete.

Only one case of transverse lesion of the spinal cord between the hypogastric and pelvic centres, due to cystic formation, with associated hæmorrhage, has come under my observation. The lesion was demonstrated by observation at operation. In this case also a period of complete retention was followed, at first, by a flow incontinence as in other cases of transverse lesion of the spinal cord, and later by a reflex incontinence occurring at frequent intervals, entirely without the knowledge of the patient owing to the anæsthetic condition of the parts. It is interesting to note that this patient had developed a pseudo-control of micturition by contracting her abdominal muscles, and thus increasing the intra-vesical pressure indirectly, and bringing the intact detrusor mechanism into play reflexly, although there is no feeling of desire to micturate (thus again demonstrating that all the affector fibres for co-ordinate micturition enter the cord by way of the sacral segments).

It would seem that the first arc of the nervous system is sufficiently well laid down by a crossed connexion between the posterior root and the anterior horn cells to carry enough impulses per unit of time to insure not only activity but spasticity of the bladder musculature, while for all other somatic reflexes in man the head ganglia of the proprioceptive system have become so important that the spinal reflex arc is not adequately laid down to maintain tonus, and therefore in transverse lesions of the spinal cord flacidity of all musculature below the level of the lesion necessarily follows.

In attempting to explain the precise method of control of micturition in the light of these observations it would seem only reasonable to assume that association fibres within the spinal cord connect the lumbar and sacral centres, and that these centres constitute a definite reciprocal mechanism controlled by the cerebral cortex. Personally I cannot bring myself to believe that two types of impulse pass out from these centres, the one inhibitory, the other activating in its effect, but believe that in the present state of our knowledge MacDougall's drainage theory can best be applied to explain this, as all other cases of reciprocal innervation. Thus, during voluntary micturition the threshold of synaptic resistance round the anterior horn cells of the sacral centre is reduced by the phasic interference of the cerebral impulse, with consequent drainage of tonic impulse from the lumbar centre by way of associational fibres. In this way the inhibition or inactivation of the lumbar centre occurs, and the trigonal and sphincter areas are relaxed, while the general bladder musculature simultaneously contracts, by reason of the activation of the sacral centre.

This view of reciprocal inhibition is further strengthened by the fact which was demonstrated by Horsley and myself, that when the contraction centre for the biceps in the cerebral cortex is stimulated the relaxation of the triceps invariably precedes the contraction of the biceps when simultaneous tracings are taken, and this would naturally be the case if MacDougall's drainage theory be correct.

It will be remembered that all experimenters agree that the results of stimulating the pelvic nerves are a simultaneous relaxation of the trigonal and sphincter areas by the bladder and urethra, and a forcible contraction of the general bladder musculature. To explain this simultaneous dilatation of the sphincter of the bladder and that of the first part of the urethra one must either presuppose that the activation of radiating muscular fibres is sufficient to bring about this result, or that a second local reciprocal mechanism is established by means of two sets of ganglion cells in the bladder musculature,

which are intercalated by a set of association fibres. This is only suggested with great temerity in order to provoke criticism.

It is not possible in the present state of our knowledge to suggest with any degree of definiteness the path of cerebral cortical control through the brain stem and spinal cord. Some time ago, in examining two cases of complete transverse lesion pathologically I was struck by the presence of a considerable number of degenerated fibres on either side of the anterior median fissure, which disappeared at the level of the 2nd and 3rd sacral segments. These anterior ground bundle fibres probably arise in the thalamus, and are continued through the posterior longitudinal bundles to the anterior ground bundles of the spinal cord.

However, Barrington's confirmation of Pellacani's work shows that, in animals at least, the anterior columns do not conduct impulses for control of micturition. Accordingly these can probably also be excluded in man. Clinical evidence also proves quite clearly that the pyramidal tracts do not convey impulses controlling this function, since they may be more or less completely degenerated in cases of amyotrophic lateral sclerosis without the slightest impairment of micturition control.

The thalamo-rubro-spinal tract may easily convey impulses for the control of this function. It is a very primitive tract, both phylo-genetically and onto-genetically, and is very resistent to conditions of pressure mal-nutrition. Hence this may account for the observation that early pressure lesions, while readily affecting the pyramidal tracts, do not affect the function of micturition.

Again, lesions of the frontal lobes, specially tumours, are associated with defective control of micturition much more frequently than any other cerebral lesions, and thus often before there is noticeable mental change, so that it may well be that the path of control of the lumbar and sacral centres for micturition is by way of a fronto-thalamic thalamo-rubro-spinal relay tract.

Perhaps it is not unreasonable in the present state of our knowledge to conclude from the above considerations that the mechanism of micturition is a reciprocal one, controlled by the lumbar and sacral centres, which are themselves dominated by the frontal lobes of the cerebral cortex, from which impulses pass possible by way of the propyramidal thalmo-rubro-spinal tracts.

THE TREATMENT OF ASPHYXIATION IN CROUPOUS PNEUMONIA BY FREE BLEEDING.

By **E. H. Embley, M.D.,**
Melbourne.

Asphyxiation in pneumonia, as denoted by marked cyanosis, is of grave significance, and invariably heralds a fatal termination if unrelieved. Measures for relief are therefore urgent. Drugs are useless and oxygen inhalation practically so. Free bleeding, however, affords relief, and the relief is definite and in most cases permanent.

It appears to me that the mechanism by which free bleeding effects relief does not admit of ready interpretation, there being so many factors more or less interdependent.

The low ratio of blood ventilation in asphyxiating pneumonia, however, depends upon the coincidence of two ultimate phenomena, namely:—

(1) Great reduction in the area of ventilating alveoli.
(2) Diminution in the volume of blood passing through the lungs per minute.

The great reduction in ventilating area is due to the well understood closure of aveoli against ventilation by the exudate within these cells. If it were possible for the circulation to remain constant, probably in all cases of croupous pneumonia, the area of ventilating alveoli would be sufficient to support life by means of the exaggerated respiratory rhythm. The insufficiency of the respiratory efforts is brought about by embarrassment of the pulmonary circulation. It is owing to this circumstance that relief can be effected by free bleeding. Were the asphyxia to arise simply from reduction in the area of ventilating alveoli, free bleeding would be of no avail.

Under the conditions of health, there are, of course, two factors ultimately concerned in blood ventilation. The first is the cross diffusion of oxygen inwards and of carbon dioxide outwards between the alveolar air and the blood film in the capillary mesh of the alveolar wall, such air being for the most part replaced by external air during each respiratory cycle. The second is the blood stream passing through the alveolar wall for ventilation. The volume of this blood depends upon the cardiac intake, and consequently its output. The greater the output—respiration being constant—the more effective is the ventilation of the blood mass. The maximum is attained under conditions in which there is adequate force in systolic contractions, accelerated cardiac rhythm (within limits) and abundant supply of venous blood.

The oxygen uptake and the carbon dioxide output have been shown by Haldane to run parallel and to be fairly constant. Oxygen starvation is therefore accompanied by diminished production and output of carbon dioxide, hence the increase of acid metabolites in the tissues and their appearance in the blood in such cases. Measurements of gaseous interchange in pneumonia by Haldane's method, however, may not be an index to the partial tensions of oxygen and of carbon dioxide in the blood, as they are in health. This is owing to the unmeasurable dilution of alveolar air by diffusion and admixture with air in the dead space of the unventilated lung areas, and to the great diminution in ratio of ventilating area to that of dead space.

Some of the effects of the accumulation of acid metabolites in the central nervous system are further exaggeration of the rate of respiration and the raising of the venous and arterial blood pressures.

Exaggeration of the rate of respiration is attended by an increase in volume of venous blood aspirated into the thorax, whereby abundant blood supply is furnished for efficient ventricular filling during the brief diastolic period of the accelerated

heart rate, so that the cardiac output is increased, the velocity of the pulmonary blood current is raised, and the efficiency of blood ventilation is correspondingly improved. Should the myocardium have become so depressed by the pneumococcic intoxication, so as to be embarrassed by the increased intraventricular pressure on right side, this ventricle gradually dilates and its output diminishes, the velocity of the pulmonary blood flow lessens, and the pulmonary ventilation falls off, so that signs of asphyxia begin to appear. If, at this stage, the patient be raised into a semi-recumbent posture, gravitation comes into play. By this means venous plethora in the thorax may be lessened, and thereby the chain of impending evils sometimes broken. If this initial asphyxia were to continue, acid metabolites would accumulate in the blood, and the venous and arterial blood pressure would rise as already stated. The resulting rise in intraventricular pressure would cause further dilatation of these cavities; the output be further diminished; the velocity of the pulmonary blood stream become lowered, and the ratio of ventilated to non-ventilated blood still further reduced. Both right and left ventricles would thus contribute to lessen ventilation. Increasing asphyxia, by further raising the general blood pressure, adds to the heart's embarrassment, and so a vicious circle is set up.

The stress falls more upon the right than the left ventricle, consequently the output from the left ventricle is not less than that from the right. But in cases of left valvular or myocardial defect, such as mitral incompetence, the output from the right side may exceed that from the left. Under such circumstances further retardation of pulmonary circulation, progressive pulmonary engorgement and asphyxiation occur additionally.

In asphyxiating pneumonia, the diminished blood flow through the ventilating alveoli effects a closer approximation to the maximum uptake of oxygen by the hæmoglobin of that blood than that which occurs in health, so that the partial tension of oxygen in such blood approaches the physiological maximum. It is for this reason that oxygen inhalation fails as a remedy in asphyxiating pneumonia. The employment of alcohol vapour in oxygen for inhalation in such cases appears to me to discredit rational therapeutics. Whether the toxins of pneumonia impair the affinity of hæmoglobin for oxygen is a question which does not enter the subject under discussion.

If, in this asphyxial condition a vein be opened and blood freely taken until a sudden drop is noticed in arterial tension, that is, when 10, 15, or 20 ounces of blood have been withdrawn, a relatively rapid recession of lividity and return of the normal mental state ensues.

With these premises granted, it seems to me that the specific result of free bleeding in asphyxiating pneumonia is due to the three following factors:—

(1) Lowering the venous blood pressure, and thus the right intraventricular diastolic pressure, by depletion.

(2) Reducing the total volume of blood, and thus raising the ratio of ventilated to non ventilated blood.

(3) To a less extent lowering the arterial blood pressure, and thus the intraventricular systolic pressure, by depletion.

Reports of Cases.

AN UNUSUAL ACCIDENT DUE TO EXPLOSION.

By **Leonard A. Wright, M.B., B.S.,**
House Surgeon, St. Vincent's Hospital, Melbourne.

The following case of injury, the result of a blasting accident, may be of interest and worthy of report.

A contractor, A.B., æt. 40 years, walked into the casualty department of St. Vincent's Hospital impaled upon a length of broom-stick, which transfixed his right hand to his right shoulder. The patient had been using the stick for tamping an experimental charge of a new explosive for blasting purposes, when an explosion occurred. He was suffering from a moderate degree of shock on arrival, and was admitted to the care of Dr. Murray-Morton. He was without coat and waistcoat and his other clothes were very dirty and dusty. The stick had been driven through the palm of his hand, transfixing it, palm forwards, to the shoulder, having passed between the first and second metacarpal bones and caused a compound fracture dislocation of the base of the first. The stick had then passed through

his shirt and singlet, entered the axilla just below its anterior fold and traversed it just above its floor in a direction upwards and outwards, to emerge through its posterior wall. There was very little bleeding from either entrant or exit wounds; there was no œdema of the arm, and the radial pulse was equal in volume to that of the left side. The skin of the face, of both forearms, and of the chest

and abdomen was tatooed with fine grit; both corneæ were powdered with grit, and the upper and outer part of the left cornea had been penetrated by a small gritty particle, which was lying in the anterior chamber on the iris.

His consent to amputation of the limb, if necessary, having been obtained, the patient was anæsthetized, the dirty clothes cut away and the chest and arm freely dabbed with tincture of iodine. An assistant stood by, ready to control the right subclavian artery. The stick was sawn across as close as possible to the dorsum of the hand, and drawn out towards the palmar aspect at which it had entered. The stick was again sawn at its point of exit at the posterior axilla and extracted from the axilla by drawing it out from behind forwards. No hæmorrhage followed the removal of either portion of the stick, and apparently the stick had passed through the axilla without injury to its main contents. A split drain-tube, cigaretted with iodoform gauze, was drawn through each track, and the wounds dressed. The skin of the forearms was painted with iodine, and a dry dressing applied. The conjunctival sacs were washed out with boric lotion, and many of the foreign bodies were removed from the corneæ. In the left eye, an upper and outer iridectomy was performed, and the penetrating foreign body removed.

After operation, an injection of 10 c.cm. of anti-tetanic serum was given in the flank as a prophylactic. This dose was repeated on the next day.

The accompanying photograph, which was taken during the anæsthesia, shows the stick *in situ*, and needs no further comment, except to explain that the metal apparatus in the picture is a Shield's mask used for administering the anæsthetic.

The further progress of the patient, communicated to me by Dr. Morton—the patient having passed from my care into a private hospital—was very satisfactory as regards the arm lesion, the shoulder and arm movements being very good and the movements of the hand only slightly impaired.

As regards the eye lesions, the right eye recovered with good sight, but the left eye unfortunately came to excision six weeks after the accident.

For the opportunity of publishing these few facts regarding this interesting accident, I am indebted to Dr. Murray-Morton, who performed the operation, and to Dr. F. A. Newman, who attended to the ophthalmic injuries.

Reviews.

LOUIS PASTEUR.

On the night of August 14, 1914, when France, Belgium and Russia had allied themselves with Great Britain in the greatest struggle the world has ever seen, in the most unpardonable carnage, unjustifiable alike because the insane and impetuous ambition of an aggressive party of a great Empire had plunged the world into a deep mourning, and because all the efforts and strivings of the world of medical science to alleviate pain, to prevent disease and to hold the hand of death are dashed ruthlessly to the ground—on that night, Stephen Paget wrote the concluding sentence of a pen picture of Pasteur and the time after Pasteur.[1] The charm of Paget's delightful skill is enhanced by the pathetic coincidence of the completion of the book and the commencement of the war. Forty-four years before, Pasteur experienced something of the same revolt against a merciless destruction of life. Paget says in his reference to the Franco-Prussian war:—

> The war broke his heart; it is pitiful, to read of his misery. . . . His letters are wild with pain—"Ne faut il pas s'écrier, Heureux les morts! . . . Chacun de mes travaux jus qu'à mon dernier jour portera pour épigraphe, Haine à la Prusse! Vengeance, vengeance!" He was helpless and useless; he had to watch his country tortured, her army defeated, her kingdom divided.

The book was published on the anniversary of his death, September 28; within a few months thirty years will have passed since his greatest achievement was accomplished; but Paget and Radot help us never to forget what we owe to the great father of modern medicine. In this volume, which is one of a series of Medical History Manuals, sufficient is told of the life, character and work of Pasteur to remind those acquainted with the history of the simple chemist, who made bacteriology possible and laid the foundation-stone to the science of immunity, of his achievements. At the same time, Paget's account of Pasteur and the effect of his work on the world of science will whet the appetite of the younger generation, whose members may, perchance, not have studied the master's life. Both young and old should read this delightful book, and reread it from time to time, to prevent the commercial side of medical life, the mercenary aims of the practitioner, from overwhelming the disinterested scientific side, as Pasteur knew it and lived up to. They will also want to place side by side with it, Vallery Radot's "*Vie de Pasteur*," on a handy shelf, to handle and to enjoy at odd spare moments. The unique Pasteur has found a biographer of rare merit in Paget.

IMMUNITY.

Books on immunity demand revision every year or two at the present juncture, because the march of knowledge has been rapid since Louis Pasteur first dealt with anthrax and rabies, and Robert Koch settled the question of the nature of tuberculosis. Authors of such books have, therefore, to be prepared to bring out fresh editions of their works in quick succession, and to embody in each the sum of the freshly-added knowledge. Citron dealt with the problems connected with immunity in a useful and compact volume some three years ago, and has found it necessary to present an enlarged second edition last year. This work was translated by an American pathologist, Garbat, and the translator has followed the original author's precept in presenting a second American edition[1] within two years of the appearance of the first. Garbat has not adhered strictly to the original German text; he has taken some licence in some more or less minor points, and has added a few paragraphs either in extension of the treatment meted out by Citron to the subject, or on some matter, not dealt with at all in the original. As far as it is possible to differentiate between added and original matter, it does not appear as if the American edition is an improvement on the German. The translator has not been happy in the choice of his equivalent expressions, and in certain places his meaning is far less clear and definite than Citron's wording. Italics are used without justification, and for no apparent reason. Instead of limiting the use of italics to foreign words and special technical terms, he follows the inelegant habit of employing them for the purpose of emphasis, just as many German authors have recourse to the trick of the printing in spaced type, sentences to which they wish to call attention. He should further be more careful in the division of German words and names, several instances of incorrect division occurring in the volume. So much for the translator.

The book itself is a fair record of what is known on immunity at present. The fact that Citron is a follower of Wassermann, and represents the Berlin school, standing midway betwen the Ehrlich school and the Metschnikoff school, necessitates a certain prominence being given to the doctrines favoured, and less detail being given to the teachings of other biologists. But this bend toward definite views adds interest to the work, and in no instance are the views expressed either unreasonably dogmatic or unjustifiably biassed. The chapters on technique and active immunization are well given, and may be regarded as a first-class exposition of a difficult subject. Completeness has not been attained, but this would be difficult in a work of reasonable dimensions. The chapters on tuberculin diagnosis and tuberculin therapy will not find general agreement or approval, but certainly reflect the views of capable

[1] Pasteur and After Pasteur, by Stephen Paget, F.R.C.S., Hon Secretary, Research Defence Society, 1914. London: Adam and Charles Black; Large Cr. 8vo., pp. 152, with 8 page illustrations, Price, 3s. 6d.

[1] Immunity: Methods of Diagnosis and Therapy and their Practical Application, by Dr. Julius Citron, Assistant at the II. Medical Clinic, University of Berlin; translated by A. L. Garbat, M.D., Second Edition, revised and enlarged, 1914. Philadelphia: P. Blackiston's Son & Co.: Sydney: Angus & Robertson; 8vo., pp. 267, 30 illustrations, 2 coloured plates and 8 charts. Price, 15s.

observers. Exception may be taken to the quotation of Wolff-Eisner's opinions, inasmuch as this observer is not regarded as an authority in matters connected with immunity. The subjects of anti-toxins, precipitins, bacteriolysins, and hæmolysins are treated skillfully, if allowance be made for the shortcomings of the translation. By far the most important and interesting part of the work is that dealing with complement deviation. Citron's ingenious theory of the tuberculin reaction, with which we are not, it must be admitted, in accord, finds a place in this chapter, and other theories are discussed intelligently and not unfairly. Those who are not familiar with the complement fixation literature will find highly useful information in this book, but should be warned that much that is passed over rapidly and in scant detail has been presented in a plausible manner by the originators.

The chapter on phagocytosis is weak, and that dealing with the significance of opsonic index determinations uninteresting. In a similar way, the work carried out on cancer immunity, such as it is, should have been more carefully prepared and more completely given. For example, no mention is made of the induction of immunity in mice to mammary carcinoma by the injection of embryonic mouse skin, as demonstrated by Bashford. Freund's views, which were favourably received in London at the International Congress of Medicine, are dismissed too abruptly. In the last place, the chapter an anaphylaxis is a distinct failure. It should be completely re-written, with full consideration of the vast mass of recent work on this subject, or left alone. The compromise serves no useful purpose, and while it is a matter of almost superhuman difficulty to separate the facts from the imagined in this connexion, a better presentation should be given, if the task is undertaken at all. The concluding chapter on chemotherapy is instructive, but the omission of the late Prof. Goldman's work on vital staining is surprising and regrettable. On the whole, this work will be read by all those desirous of learning the present position of immunity studies, not as the authoritative work, but as a good abstract of our knowledge. On account of the excellent chapter on complement deviation the book is worth reading.

LEAD POISONING.

The literature on lead poisoning is already alarmingly extensive. Every text-book deals with the subject, more or less unsatisfactorily; numerous articles, casuistic records and monographs add a little—or nothing—to our knowledge of the toxicology of this metal and its salts; and a large number of books treat, with varying degrees of completeness, of the subject from its many aspects. But the number of works of recognized merit on the toxicology of lead is comparatively small. For this reason, a volume,[2] representing the book form of Sir Thomas Oliver's lectures, which were delivered in the Royal Institute of Public Health, London, will be welcomed by pharmacologists, toxicologists and hygienists, not only in the British Empire, but all over the world. It is scarcely necessary to point out that the author is a master of his subject, that his statements are absolutely reliable, and his presentation of the matter suggestive and practical. The book contains a summary of our knowledge on lead in its relation to the human organism in an almost complete form. Sir Thomas Oliver has thought fit to condense the part dealing with the commercial side of lead, its smelting, and the preparation of red and white lead. The necessity of limitation is undoubted, but it would have been interesting and not without some significance, had the author given us his views of the relative safety of such methods as the Brimsdown wet process of manufacturing white lead and similar modern refinements. It would lead too far were we to follow him through each chapter of the work, nor is this necessary, for the book must be purchased by all who wish to keep themselves abreast the times on this important social problem. A few words, however, may be devoted to one or two of them. In dealing with the various ways in which lead poisoning is produced, he calls attention to the ingestion of the metal in food and drink, the inhalation of fumes and the breathing of particulate matter. The self-administration of diachylon for the purpose of procuring abortion is treated with the seriousness it deserves. Sufficient detail is given to the commoner and rarer ways in which lead may be carried to the mouth and give rise to toxic symptoms. He instances the appearance of colic, headache and amaurosis, with retinal hæmorrhages in an actress; he was able to trace these symptoms to the use of cosmetics containing lead. Hair-dyes have, he tells us, caused serious symptoms. The work of Goadby and Legge have confirmed the suggestion of Alderson that lead may be absorbed through the respiratory organs. All these matters are to be found in the book, set out in clear language and in proper sequence. The chapters on the toxicology proper, including the morbid changes produced in the tissues, the physiological effects, the route of absorption and excretion and the rough chemistry of the lead combinations within the organism, form good reading. Mention should be made of the fact that while Sir Thomas Oliver has made many original observations in connexion with this subject, his book does not contain any startling new facts or propositions which would necessitate a recasting of the toxicological teaching. But many of the aspects are presented in a manner which will tend to guide the hygienists to investigate in a useful direction and to add to our still incomplete knowledge of the subject. Lastly, the value of the work is increased by the re-publication of the Factory and Workshop Orders, which represent the most effective regulations yet introduced for the control of plumbism.

[2] Lead Poisoning, from the Industrial, Medical and Social Points of View: Lectures delivered at the Royal Institute of Public Health, by Sir Thomas Oliver, M.A., M.D., F.R.C.P., 1914. London: H. K. Lewis; Cr. 8vo., pp. 294. Price, 5s.

THE BRITISH PHARMACOPŒIA, 1914.

The following announcement has appeared in the Queensland Government *Gazette*:—

Home Secretary's Department,
Brisbane, 26th February, 1915.

His Excellency the Lieutenant-Governor, with the advice of the Executive Council, has, in pursuance of the provisions of "The British Pharmacopœia Adopting Act, 1898," been pleased to declare that "The British Pharmacopœia, 1914," shall have force in Queensland on and after the 1st January, 1916, and shall then be substituted for the British Pharmacopœia as published under the direction of the General Council of Medical Education and Registration of the United Kingdom in the year 1898, which is at present in force in the State of Queensland.

K. M. GRANT.

February 27, 1915.

Some fresh trouble between the Friendly Societies in Warwick, and the local profession has arisen in regard to the payments of private fees for which the Friendly Societies' Association has undertaken the responsibility. A movement is on foot in regard to payment for operations performed on patients who are in a position to pay private fees, when the operations are performed in the hospital. We learn that the matter has been referred to the Home Secretary.

A baker named Michael Cosgrove has been fined £3 and costs for failing to comply with the bylaws regulating the conduct of bakery. The prosecution was instituted by the Maylands Board of Health (Western Australia). It appears that the defendant was found asleep in the trough in which the dough is made. The bakery was in an abominably dirty condition. In view of the fact that no defence was put in it is difficult to understand why such a ridiculously small fine should have been imposed for so serious an offence.

The following have been appointed members of the Board of Directors of the Lady Edeline Babies' Hospital, Vaucluse, New South Wales:—

Mrs. Eliza Ann Cann,
Mrs. Mary Davies,
Mrs. Mildred Griffith,
Mrs. Vera Ladell Harkness,
Mrs. Gertrude Mary Melville,
Mrs. Norah Kathleen Ogilvie, and
Mrs. Eva Mary Seery.

The Medical Journal of Australia.

SATURDAY, MARCH 13, 1915.

Tropical Medicine.

In another column reference is made to the announcement of the Hon. H. Mahon, the Minister of External Affairs, in regard to the institution of six scholarships in tropical medicine. It is realized that the successful development of the Northern Territory and of Papua is largely dependent on the safeguarding of the health of the settlers. Experience has taught that many highly valuable provinces and countries are of small utility to our Empire on account of the unhealthy conditions prevailing and of the difficulty in driving out deadly diseases once they have established themselves. Preventive medicine is always more important to the community than curative, but nowhere more so than in tropical lands. For this reason, the Minister has done wisely to start a campaign of educating young practitioners in the bacteriology and protozoology peculiar to tropical climates. The preliminary training is to be given at the Australian Institute for Tropical Medicine at Townsville, under the capable tuition of Dr. A. Breinl. Here the selected students will receive a thorough groundwork for further development farther afield. The proposal of the Minister is to tempt these practitioners to settle in private practice or in the Government service in the north.

But mere residence in these districts, even if associated with medical practice, will not ensure the progress which is so important a factor. Further stimulation is necessary, and this stimulation must be of the proper kind. A few years ago, when bacteriology was not included in the regular course of university students, the bacteriologist, with a few notable exceptions, was a mere collector or specimen-hunter. The ultimate object of the bacteriologist in those days was to discover a fresh bacterium. If the bacterium was pathogenic, so much the better, but at all costs it had to be found. Since those days, a second phase has come and gone. The laboratory worker sought some artificial character of a recognized bacterium, and watched for strains which showed some variations from the alleged standard type. All the work done in these directions proved highly useful, and has served as a practical stepping-stone, but it must be recognized that it was but an early phase in the history of bacteriology. The protozoologist was less tempted to follow in these lines, and evidenced more immediate ingenuity at an early date by directing his attention to the biological characters of the living things with which he dealt. How important biological and entomological study has become in the furtherance of our knowledge of infective diseases, especially in the tropics, is shown by the history of yellow fever, malaria, and sleeping-sickness. The field of research open to the worker in tropical medicine can only be trodden with the assistance of a thorough biological and entomological training and a sound acquaintance with bio-chemistry and possibly general organic chemistry. Large problems have to be studied in every tropical country, if we would keep them free from imported scourges and clear them of endemic infections. It must be remembered that the workers, after their training is completed, will be isolated to a great extent from other seekers after truth concerning tropical medicine and hygiene. To retain the enthusiasm necessary for fruitful work, special facilities must be established. Private and Government practitioners in the north should be given opportunities at frequent intervals of returning to Townsville or to one of the great Australian Universities in order that they may be in a position to exchange ideas with others and enlarge the sphere of their own thought. An excellent method of obtaining the maximum service of a valuable kind from highly trained men in the tropics would be to establish teaching posts in the Universities or medical schools, to which each man would return after six months in the tropics, and where they would impart their knowledge to students for a period of six months prior to returning to the north. If a special piece of work rendered it inadvisable to leave the tropical area at the end of each six months, arrangements should be made to keep the

teaching posts open until the practitioner would be able to take up his half-yearly duties as a teacher

THE VALUE OF EXAMPLE.

The proposition placed before the members of the South Australian Branch of the British Medical Association on February 25, 1915, and endorsed by the meeting, constitutes an interesting endeavour to find a solution of a serious problem. The British Empire has been forced to take up arms to protect the interests of treaties and to safeguard her own position against the aggressive onslaughts of a great military power. That power must be crushed, but Britain is called upon to make huge sacrifices to render this crushing complete and effective. The people of the British Isles have mustered around the flag willingly and promptly, but those resident in the Dominions beyond the seas are not prepared to let the Mother Country do all the fighting and bear the whole brunt of the price of victory. In this emergency, the greatest the Empire has ever known, patriotic citizens have come forward ready to take up arms, and, if necessary, to lay down their lives for the just cause. But a shadow has crept over the scene, which must be quickly effaced, or the honour of the Commonwealth will suffer.

Excesses have been indulged in. Drunkenness is common among the recruits and among the troops now in Egypt. Venereal infections have spread among our men and have incapacitated a considerable number. Quite apart from the fact that the immediate and direct result of alcoholism and syphilis is to rob the effective line of many physically robust, athletic soldiers, excesses *in potu et in venere* must detract from their disciplinary adroitness and fighting value. The fault, in so far as the alcohol is concerned, may not be entirely traceable to the recruits or soldiers. Mistaken kindness on the part of thoughtless individuals may be responsible for the intoxication of some of the men; but not of all.

How can this evil be checked? Dr. Poulton, of Adelaide, and a number of his colleagues in the fair city in South Australia hold the opinion that example set by medical practitioners will result in a sensible reduction of these lapses. It is suggested that the recruits and the soldiers in Egypt should be informed that the medical profession in the Commonwealth has so strong a conviction of the harmful action of alcohol, that they have determined to abstain from its use during the currency of the war, in the hope that the recruits and soldiers will follow this excellent example. This presupposes three things. In the first place, the recruit and the soldier must be forced to consider the significance of this action of the medical profession. In the second, it is essential that both are persuaded that the determination will be carried into effect by, at all events, a substantial majority of the doctors. It may be difficult to convince them that the movement is widespread and sincere. Thirdly, it is assumed that after they have been informed of the resolution of the doctors and of the general adoption of the principle, the man who has been weak enough to indulge without restraint can be induced to follow the example. There is no doubt, whatsoever, that of all the suggestions that can be brought forward to effect a voluntary reduction of alcoholic excess in the army, this is the most useful and powerful. For even if it failed in its original purpose, it is a step towards the attainment of the object of all advocates of temperance. Failing such a measure, stringent regulations would be required to place all alcoholic beverages outside the reach of recruits and soldiers.

The whole profession will sympathize with Dr. Poulton's endeavour to find a remedy for an undoubted evil. The proposal should be discussed in each of the Branches, and if it finds favour with the majority, a strenuous effort should be made to render the movement as general as possible. Whatever may be the chances of success following its adoption, no one will doubt that these chances will be largely reduced if the renouncing of all forms of alcoholic beverages is limited to a few.

DAYLIGHT SAVING.

In his very able address, delivered at the annual meeting of the Queensland Branch (see *Medical Journal of Australia*, December 26, 1914, p. 605), Dr. Brockway touched upon the question of a Daylight Saving Bill, for which he claimed certain definite advantages for the populations of Australia in general, and of Queensland in particular. The proposal received the support of almost every member present at the meeting and steps are now being taken to educate public opinion in its favour, prior to the introduction of fresh legislation. The success of a scheme of this kind depends to some extent on the

attitude which our neighbours take toward the movement. For this reason, the Queensland members are naturally anxious to induce the other States, New South Wales and Victoria more especially, to adopt a similar policy. If the Queensland clocks are to be advanced two hours on the last day of August, and to be put back two hours on the last day of April, some difficulty would be experienced on the railway unless New South Wales, the adjoining State, followed suit. A fixed difference in time which remains constant can be remembered and allowed for, but a varying one would entail confusion. In a similar manner, if New South Wales adopts the proposal, Victoria should follow suit, and then South Australia.

Under these circumstances, the Council of the Victorian Branch will consider this matter at its next meeting, and we trust that all the other Australian Branches will do the same. The waste of daylight all over the world is too notorious to need comment. But it is a common experience that, although the remedy lies within the easy reach of every citizen, scarcely anyone grasps it. It is not so easy for the average person to begin the day at daybreak and end it at dusk. Habit ordains that an ordinary person's day begins with breakfast at 8 or even 9 o'clock, that is many hours, during the summer months, after the sun has risen from its bed beyond the Pacific. In order to make the horse drink, when brought to the well, a builder, named William Willett, living in London, advocated close on ten years ago the proposal of altering the clocks, so that, without any effort on the part of the individual, the day would begin earlier when the days are long, and later when they are short. The most powerful argument in favour of this scheme, as applicable to Queensland and other States of the Commonwealth, is the effect it must have on school children. To send a frail young child to school after the summer sun has risen high in the heavens and is pouring hot rays on the earth is to handicap it to the point of breaking. These children start the day tired, worn and stifled bodily and mentally. Education becomes a cruelty under such conditions, and recreation a farce. The remedy which Dr. Brockway suggests would bring them the maximum relief. There is no doubt that legislators will not lightly agree to a proposal which entails a radical change in daily routine. But sound arguments will overcome stubborn resistance, and experience teaches that, in Australia at least, if the medical profession determines that an innovation is for the public welfare, this innovation will receive the careful consideration of the legislative bodies.

THE HOBART GENERAL HOSPITAL.

The appointment of a second Royal Commission to enquire into the management of the General Hospital in Hobart has, as was inevitable, caused a considerable amount of criticism. The position, briefly stated, is that Dr. McClintock, the Chief Health Officer of Tasmania, was appointed sole Commissioner to enquire into the management of the hospitals in the State. He made enquiries, took evidence and issued in the course of time a report. The evidence and report have been discussed in these columns, and from these the conclusion arrived at was that the Health Officer did not possess sufficient skill in taking evidence, or in weighing it when taken to justify his position. Recommendations were included in the appendix of the report in regard to the remedy of the alleged defects at the Hobart General Hospital, and the report itself contained an indictment of the present system of election of members of the Board and other matters connected with the hospital. Since the question of the management or mismanagement of the General Hospital is now subject to a further enquiry, no critical analysis of the findings of the Commissioner may be undertaken. But it is permissible to raise objection to the constitution of the second Commission, to which the specific case of this particular hospital has been referred. The Board felt incensed at the strictures, and asked for the appointment of a Select Committee of the House of Assembly to investigate the charges made by the Commissioner. This request was refused, and, as an alternative, it was decided that the second Commission should be appointed, and that the Board should be informed of the proposed personnel of this Commission. The Minister accepts the whole responsibility for the appointment of Dr. McClintoch and Messrs. Wishart Smith and Seager, but he did not submit these names to the Board before the appointments were made. The Board of the Hospital discussed the position on February 26, 1915, and expressed indignation at the manner in which they had been treated. Two of the members resigned. This action is always foolish, for voluntary resignations robs the individual of the right to speak and to act; as a mark of protest, it is sterile. The Chairman and several other members determined to retain their positions, partly because they recognized the duty they had to perform for the sick poor, and partly because they held the opinion that the Government was trying to get rid of them.

The two lay members of the Commission are members of the Public Service, and are highly respected. But they are departmental, and as far as we are aware, have no special experience in hospital administration. Had the Minister intended to institute a real enquiry into the efficiency of the management of the hospital, he would have adopted a different course. An experienced Judge, with training and capability in taking evidence and weighing it would have been selected in the first place. The second choice would have fallen on an impartial citizen, with knowledge of administration and financial matters, but without any connexion with either the Governmental Services or the Houses of Parliament. The third member should have been a medical man called for the purpose from another city, or preferably from another Australian State. This member should have been selected for his general experience in hospital administration. The fourth member should have been a member of one or other House, to look after the interests of the people of Hobart, and the selection should have been made with due consideration for his broad-mindedness and

knowledge of men and affairs. The fifth member might have been a prominent official of a State Charity Department from another State. But to ignore all these types, and to hand the question over to two departmental gentlemen, and an expert in sanitation who had conducted the first enquiry with such unsatisfactory results, is evidence of the intention of the Minister not to elicit a valuable opinion, but to throw sand into the eyes of the public. The first act of the new Commission is significant, and strengthens the view just expressed. The two departmental members elected Dr. McClintock chairman. The Hospital Board has recorded its protest against the inclusion of Dr. McClintock in the second Royal Commission, and has expressed its regret that the Chief Secretary did not refer the names of the Commissioners before their appointment to the Board. The Minister's reply was the reply of a skilled parliamentarian. Whatever the findings of this Commission may be, it is reassuring to remember that the final arbiters of the question will be the people of Hobart in whose sense of justice and judgement we have full confidence.

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Vital Statistics.

VARIOUS STATISTICS FROM SOUTH AUSTRALIA.

The Statistical Register of the State of South Australia for the year 1913 is a voluminous production, which, although somewhat belated in its appearance, contains so much of absorbing interest that, even at this date, considerable utility attaches to its publication. It is always worth while learning something about ourselves, and the Statisticians of the six Australian States do not hesitate in holding up the mirror. The Register before us does not deal with the colour of hair and eyes, the height of the individual or other anthropological details, but limits itself to a record of mass calculations concerning the people and their habits. The first record of the population of the State dates back to 1836, when South Australia contained but 546 souls. Within two years the figure had increased to 6000, to a great extent by immigration. These figures presumably are records of the white population, and do not include aborigines. In 1838, 75 couples were married, 83 infants were born and 67 persons died. Emigration had not begun. The growth of the population was rapid, owing to a large immigration in the years that followed. From 1840 to 1853, the increase was steady, although the rate of increase was diminishing all the while, as would be expected. In the following year, a sudden and unusual influx of over 20,000 persons into the State, associated with a diminished emigration, not only caused the population to approach its century of thousands before this would have been anticipated, but carried with it an extraordinary amount of prosperity, the area of land under cultivation and alienation, the productivity of the land, and the extent of export and import rising in a most wholesome and promising manner. During all the years from the foundation of the State up to 1885, the increase in the number of births was regular and healthy. The deaths naturally increased at a similar rate, and this increase was not slowed until the middle of the seventies. The effect of hygiene or increasing prosperity is well marked throughout the eighties, nineties and in the present century. Immigration did not remain at the high level of 20,000 but sank to just over 2000 in 1870. Six years later, the reaction again set in, when close on 14,000 persons arrived in the State, and since then the figure has crept up to a very high level. In 1913, 115,500 persons arrived in the Southern State. A discount, however, has to be allowed for. Emigration, which began in the early forties, only exceeded 10,000 twice prior to 1880. From that year, it increased irregularly but definitely, and has exceeded 100,000 in both 1912 and 1913.

It has been stated that the best index of general prosperity is the revenue of railways and tramways; better than the general revenue. In 1854, when the trams or railways first carried passengers in South Australia, 5000 persons made journeys during the year, and the gross receipts were £813. Two years later, no less than 248,451 persons travelled in this manner, and paid the sum of £21,952 for this privilege. Thence forward the increase in the number of passengers was remarkably uniform, and in the year 1914, was not much short of 20,000,000. The gross receipts varied much more than did the number of passengers, but the general upward tendency is very marked, and in the year 1914 the amount of £2,337,251 was received, £1,505,705 was spent in working expenses, leaving a profit of £831,486, which is approximately 5.3% on the capital of £15,700,000.

In the year 1850, the first State or Public Schools were opened. There were 64 brought simultaneously into existence, and in that year 1867 children received some form of education. The total population in this year was 63,700, so that the ratio of school children to the total population was 1: 34. In 1880, the number of school children had increased to 36,277, and the ratio works out at 1: 7.3. The numbers increased to 62,439 in 1900, and the ratio was then 1: 8.4; and in 1913, no less than 58,656 children attended the schools, which gives a ratio of 1: 7.5. In the lastnamed year, there were 815 schools, that is, almost thirteen times as many as in 1850.

Part V. of the Register deals with the record of the Law Courts, Crime and cognate matter. This part occupies 32 foolscap pages of figures containing the most interesting and important information. The statistical summary of the civil courts, despite their great importance to the welfare and happiness of the community, cannot receive analysis in this place. On the other hand, the criminal cases have considerable bearing on physiology, psychology and hygiene. The first table contains the records of the Supreme and Circuit Courts in the year 1913. The total number of cases tried was 123, and the total number of prisoners convicted was 86. Five of these were women, and 81 men. During the past ten years, the number of prisoners tried, and of convictions, has remained remarkably constant. The average number of cases was 115.5, while the highest was 133 and the lowest was 98. The average number of convictions was 86.1, the highest being 109 and the lowest 68.

In 1913, only one woman was convicted of an offence against the person. This was a case of attempted suicide. Two women were charged with murder and one with concealment of birth, but all three were acquitted. One man was charged with murder but convicted of manslaughter. Twelve males were convicted of sexual crimes (indecent assault, carnal knowledge of children, rape, incest, and attempt to commit an abominable offence), and two others were convicted of attempted suicide. In all, 20 persons were convicted under this rubric, and 18 were discharged or the case withdrawn. In regard to offences against property, there were 69 charges and 54 convictions. Three of the convicted prisoners were women. Twelve persons (11 males and one woman) were convicted of forgery and offences against the currency. During the decennium 1904-1913, no aboriginal has been executed, and only 7 white persons. The last execution took place in 1910.

In the magistrates' Courts, 9438 persons came into conflict with the law, and were charged on 13,183 separate occasions. The cases are sub-divided into the usual classes. In addition to those persons committed for trial in the higher courts for offences against the person, and therefore included in the figures quoted above, a large number of convictions were obtained for common assault. Offences against property, and offences against the currency and forgery were comparatively common. There were 404 convictions, 205 being for robbery and stealing from the person. The fourth class, dealing with offences against good order were deplorably common. No less than 5555 convictions were for drunkenness, 362 for drunkenness and disorderly conduct, and 45 for habitual drunkenness. In 311

cases, a conviction was obtained for indecent, riotous or offensive conduct. On 217 occasions, persons were convicted for being rogues and vagabonds, and 31 women were convicted for loitering for prostitution.

Of particular interest to the medical profession is the record of the breaches of certain Acts of Parliament. Five convictions were for breaches of the Affiliation Act, 4 under the Children's Protection Act, 47 under the Education Act, 4 under the Factories Act, 46 under the Food and Drug Act, 32 under the Health Act, 2 under the Indecent Advertisement Act (these must have been extremely flagrant cases, taking into consideration the bold advertisements for immoral purposes which appear in the lay press of the State), 273 under the State Children Act, 16 under the Vaccination Act, and 86 under the Vermin Act.

The record of drunkenness is not necessarily an index of the extent of alcoholism. But in the absence of other statistics, *e.g.*, the revenue from the sale of alcoholic drinks, convictions may be regarded as a fair guide of the effect of temperance endeavour. In 1904, 2,387 persons were convicted for drunkenness. This represents 0.659% of the mean population. The actual number of convictions, as well as the percentage, increased with disquieting rapidity. In 1911, the figures were 4,673 and 1,125%, in 1912 5,470 and 1.284%, and in 1913 they were 5.994 and 1.375%.

The number of persons of unsound mind dealt with through the Magistrates' Courts does not appear to be increasing materially. In 1904, it was 113, in the following six years it averaged 78.6, in 1911 it was 65, in 1912 it was 77, and in 1913 it was 110.

The youngest prisoner received into gaol was 14 years of age. The majority were between the ages of 20 and 60 years, and the oldest was over 80. One man was convicted for the fourteenth time; second, third, fourth and fifth convictions were common, while 899 out of 1,335 were convicted for the first time.

The record of the diseases from which prisoners in the various gaols were suffering is given in a somewhat rough manner. From these records, it would appear that diseases of the brain and nerves required treatment 47 times, while diseases of the respiratory organs and of the alimentary system were more common. Ten prisoners are stated to have been treated for hepatitis, presumably of alcoholic origin. Venereal diseases called for treatment on 61 occasions.

In regard to the social status and occupation, etc., of the prisoners, it appears that of the six "professional" men in gaol, two were chemists, two jockeys, one was a cinematographist (we wonder at this classification; in South Australia, this term does not seem to be limited to the "liberal" professions, but to be extended to callings not usually classed in this manner), and one journalist. The majority belonged to the industrial classes, the preponderating calling being that of labourer, while seamen and firemen, and women engaged in domestic duties other than service were the next most numerous. Of the total of 1335 prisoners, 53 could neither read nor write, and 9 could read but not write.

The statistics dealing with inquests lack the most important information, namely, whether a post-mortem examination was carried out or not. In 1913, 104 inquests were held. There were 18 cases of "natural causes," 2 of "intemperance," and 3 "found dead." Poison is entered three times. There were 16 cases of suicide.

CHARITY IN WESTERN AUSTRALIA.

The Superintendent of Public Charities of Western Australia has published his report on the work of his department for the year ending June 30, 1914. He divides this work into three classes, *viz.*, the general assistance to the destitute, the special monetary assistance to widows and other destitute women, and the supervision and general control of the homes for the aged and infirm. He points out that in every case a systematic investigation is instituted, in order that the treatment afforded may be individual and appropriate. The investigation is carried out by a visiting officer, but in those cases in which urgency is obvious, help is at times given beforehand. It appears that very little abuse took place within the year.

Under the heading "general assistance," he explains that a money allowance is given or rations are granted. The rations are not supposed to cover all the requirements, but to supplement the supplies procured from other sources. In cases in which the individual is permanently destitute, incapable of earning, and without other means of assistance, it is usually necessary to admit the applicants into one of the homes. During the year monetary payments to the amount of £1,224 17s. 6d. were granted. Excluding the widows and children specially helped, 839 adults received assistance either in money or in kind.

In the second chapter, he states that special assistance was accorded to 461 mothers and 1,293 children. Three hundred and thirty-one of the mothers were widows, 68 had sick husbands, 17 had husbands in asylums, 3 had husbands in prison, and 42 were deserted. Of the total number, 177 mothers and 515 children received assistance for the first time during the year. The amounts paid varied between 5s. and 42s. a week. The actual expenditure for relief assistance, but excluding the cost of upkeep of the homes, amounted to £20,734 7s. 11d. These payments vary in accordance with the number of children and the financial position of the mother. The maximum for each child under 14 years of age is 7s.

The home for men, situated at Claremont, harboured 567 inmates on June 30, 1914. Eight hundred and fifteen individuals were admitted during the year, 276 of whom had not received this form of help before. The average age was 64 years, and while the majority were infirm from old age, others were suffering from chronic affections. General debility appears 358 times in the list, imbecility 36 times, partial amaurosis 14 times, complete blindness 22 times, paralysis 40 times, heart disease 24 times, asthma 8 times, epilepsy once, malignant disease (including rodent ulcer) 7 times, rheumatism and rheumatic gout 6 times, renal affections 5 times, and a few other conditions once each.

The number of deaths occurring in the home during the year was 82. The causes are stated to have been senile decay on 49 occasions, carcinoma on 9 occasions, locomotor ataxy on 2 occasions, uræmia on 2 occasions, tuberculosis on 1 occasion, spinal paralysis, paraplegia and syphilis on 1 occasion each, and various conditions, presumably referable to affections of the cardio-vascular system. The average age of death was 72 years and 9 months, while the oldest inmate who died was over 90. The upkeep of the home cost £12,297.

In the home for women at Fremantle there were 75 inmates on June 30, 1914, and 13 in the maternity ward. There were 66 admissions into the maternity ward, 36 of the patients being single girls and 30 married women. The sum of £2 is deducted from the maternity bonus. Four infants were prematurely born and three stillborn. One mother died of peritonitis. In the home 8 deaths took place, 5 from senile decay, 1 from epilepsy and 2 from heart disease. The average age at death was 62. In connexion with the maternity ward there was a maternity training school, at which students attend lectures and undergo training. There were 23 students during the year. The cost of the home was £2,307.

In the last place, the Superintendent deals with old persons in receipt of pensions. Of the 138 invalid and old-age pensioners, only 21 were being paid for by the Commonwealth Government. The rate is 8s. a week. There were 34 inmates of the Old Men's Home who received a pension, and left the institution. Forty-seven entered the home for the first time, and 172 were re-admitted. The Superintendent expressed the opinion that a pensioner should be allowed to draw his pension and spend it as he pleases, and if he chooses to do so he should be able to enter a Government Home, where he would pay 8s. a week and keep the remaining 2s.

Abstracts from Current Medical Literature.

OPHTHALMOLOGY.

(76) Ocular Angio-sclerosis.

As vascular changes usually begin after the age of forty, Krebs (*The Ophthalmoscope*, December, 1914) believes that the fundi of all patients after this age should be carefully examined, the blood pressure estimated, and the intra-ocular tension measured by a Schiötz tonometer. Endothelial and subendothelial thickening occurs in the inner coats of the arteries, hyaline and fatty degeneration in the middle coat, and later thickening of the outer coat. As a result, the nutrition of the retinal and other ocular tissues suffers, and hæmorrhagic spots are seen in the retina from the weakening of the vessel walls. Sudden diminution of vision occurs if the sclerotic changes occlude the central artery or vein, or if a large hæmorrhage occurs. Other subjective signs are early decrease in the power of accommodation and persistent headache after the refraction has been corrected. Among the objective signs are *arcus senilis*, slow reaction of pupil, hyperæmia of the optic disc, and patches of œdema of the retina. The arteries may be tortuous in their course, tending to flatten out a vein when crossing it, and there may be an increase in brightness of the light streak in the artery (the silver-wire appearance), and a more or less continuous whitish streak outside the vessel wall may be observed. Where an artery bends sharply the locomotor arterial pulse may be seen, and the hæmorrhagic spots of various sizes may be observed near the vessels. Changes may be seen very frequently in the veins, as well as in the arteries. By the early recognition of these changes in the arteries it may be possible to conserve the health and prolong the life of patients who are unconscious of their serious condition. Such patients must be moderate in work, in eating, in exercise and in personal habits of life. Iodides and nitrites and sedatives may be of value.

(77) Simple Angioma of the Choroid.

Love's patient was a male, aged 20, whose left eye had been blind from birth (*Archives of Ophthalmology*, November, 1914). He had been suffering from periodical attacks of pain and inflammation, and the eye was always irritable. On admission, the entire left side of the face was covered with a purplish nævus. The tension of the left eye was 35 (that of the right 25), the lids were swollen, and the cornea hazy; the pupil was dilated, and a yellowish reflex was seen. There were several staphylomatous bulgings 3 to 7 mm. behind the limbus. The eye was enucleated on account of glaucoma. The choroid was found to be normal up to about the equator, where it began to thicken up to the posterior pole (3 mm.). Microscopically, it was found to be made up of large capillary blood vessels. In 1905 Fehr collected nine previously recorded cases; since then the author has found ten others. It is probably commoner than the reported cases would indicate. Six of these cases were associated with nævi of the face, as in the case described. The author concludes that angiomata of the choroid usually begin in the region of macula; they are not cavernous in type, but, like congenital nævi of the skin, simple angiomata. They are probably due to some congenital disturbance in the innervation of the vessels supplying the affected organ.

(78) An Easy Method of Enucleation.

Freeland Fergus invariably uses a general anæsthetic (*Archives of Ophthalmology*, November, 1914), and only three instruments, *viz.*, straight scissors, forceps and speculum. The conjunctiva is divided freely over the external rectus, exposing that muscle. One blade of the scissors is passed beneath the muscle, and it is divided, a small portion of its tendon being left attached to the sclerotic. This portion is seized with the forceps, and the eye is rotated towards the inner canthus. The optic nerve is then severed with perfect ease. The movement of rotation is continued, and all the other tissues are, as they come into view, divided close to the sclerotic. A gold ball may be inserted, or the muscles sutured together if the operator wishes. The author stands on the same side as the eye to be enucleated, and always divides the external rectus first and then the nerve. By this method a considerable piece of nerve is left attached to the eye-ball, an important point when the eye is enucleated for intra-ocular tumour.

(79) Bilateral Keratoconus.

Fleishcher describes the anatomical condition of bilateral keratoconus and the brown ring found in the cornea in this condition (*Archives of Ophthalmology*, November, 1914). The patient, a man of 23 years, was suffering from vertebral caries. There was high-grade keratoconus in the left eye, with opacities at the apex of the cone. Both eyes were enucleated six hours after death, when the conical form of the left cornea was very evident, while the right cornea was apparently normal. Of chief interest was a small brown ring seen in both eyes, about half-way between the limbus and corneal centre. The ring was 4 mm. in diameter and ½ mm. in width, brownish yellow in colour and situated in the most superficial layers of the cornea. Microscopically, the brown discoloration was seen to be in the corneal epithelium, without involvement of Bowman's membrane. With potassium ferrocyanide and hydrochloric acid, it stained blue, indicating the presence of iron. An examination of serial sections revealed at one spot an empty blood-vessel, and close to it a granule of hæmatoidin. Sections of the left cornea showed that the periphery was of normal thickness. The *substantia propria* was thinned at the junction of the outer and middle third, and markedly so at the point where the apex of the cone began. Thinning of the corneal epithelium was seen at this situation. At the centre of the cone the cornea was half the thickness of the cornea a the periphery, and the *substantia propria* one-third. The author discusses the literature of the subject.

(80) Alimentary Toxæmia.

In the discussion on alimentary toxæmia at the Royal Society of Medicine, Lang said that he had taught for the last ten years that a chronic source of sepsis could cause an inflammation in any part of the eye (*Proceedings Roy. Soc. Med.*, 1913, Vol. VI., No. 7). William Hern pointed out that pyorrhœa was present in every case of *acne rosacea*. The author described a case of combined acne rosacea, pyorrhœa and keratitis. After the treatment of the pyorrhœa the keratitis ceased to return. Since then he always examined the gums in obscure cases of ocular inflammation. In tables made from the notes of the last 10,000 patients, it was found that 215 cases were the result of sepsis. Of these 215 cases, pyorrhœa was responsible for 139, infection from the colon for 33, and infection from the urethra for 20. The part of the eye affected was the iris in 87 cases, the ciliary body in 79, the chorold in 68, less often the retina, sclerotic, and cornea. Even mild cases of pyorrhœa could cause central choroiditis. In the absence of signs of infection, the pyorrhœa should be treated with ionization and other local means, but when the eyes are infected the teeth should be extracted. Before extraction, the gums should be cleaned and sterilized; otherwise, the eye condition might become worse from increased local absorption of toxin. Before operations, the patient's mouth should be examined, and a search made for other septic foci. The author records numerous cases, illustrating his points, and concludes with the hope that the importance of proper food and mastication, and attention to hygiene of the mouth would be taught generally.

LARYNGOLOGY AND OTOLOGY.

(81 Exploratory Puncture of the Antrum of Highmore.

Brown Kelly (*Journ. Laryngology*, December, 1914) in dealing with the difficulties and dangers of puncture of the Antrum of Highmore, prefaces his remarks by the statement that when followed by perflation and irrigation this is the most reliable method of diagnosing antral suppuration. It is customary to make a perforation beneath the inferior turbinal, using a Lichtwitz trocar and cannula. In patients under twelve years, puncture of the inferior meatus may be unsuccessful, because the floor of the antrum is still high. It is therefore necessary either to direct the trocar obliquely upwards from the inferior meatus, or to carry

the procedure out through the middle meatus. The latter route may be utilized up to the time of eruption of the first permanent molar. In patients with a narrow type of face, prominent nose, and sunken anterior antral wall, the puncture must be made further back in the inferior meatus than usual, in order that emphysema of the cheek or phlegmonous cellulitis from infection of the tissues by pus carried from the antrum be avoided. Patients suffering from ozœna and atrophic rhinitis seem to have either a thick naso-antral wall or a small antrum, and the puncture is often made with difficulty. The following conditions may prevent successful perflation: (*a*) In acute cases when the ostium is blocked, cocaine and adrenalin is applied in the neighbourhood of the ostium, and if swelling of the mucous membrane is not reduced, a second cannula is inserted into the ostium. (*b*) A polypus in the antrum may intermittently occlude the ostium; the valve-like action may sometimes be avoided by changing the position of the patient's head. (*c*) The antral lining membrane may be thickened, and thus obliterate the cavity. In these circumstances, the cannula should be pushed forward until the point impinges on the opposite wall, and then slowly withdrawn, meanwhile air should be blown through the cannula as it is pushed onwards. (*d*) A dental cyst may fill the antrum. When the instrument pierces the cyst a few drops of clear liquid with cholestearin crystals may escape; but attempts to blow through will be unsuccessful; or the point of the instrument may pass over the cyst and the test be negative. A cyst of the antral lining membrane may behave in a similar manner. (*e*) Caseous pus and mucus sometimes offer resistance to the passage of injected air; this may be overcome by moving the cannula about and blowing at different depths.

The dangers of the process are: (1) Emphysema, infiltration, or abscess, with constitutional symptoms, in region of canine fossa. (2) Abscess of cheek from pus forced through the fissure in the antral wall. (3) The subperiosteal tissue in the antrum becoming infected. (4) The orbital structures impinged on, producing emphysema or abscess. (5) The outer wall of antrum being penetrated and air being forced into the pterygoid plexus of veins, and thence into the jugular veins. (6) Simple puncture, admitting infection, has produced fatal pemphigus. (7) Other disturbances noticed include a rise of temperature, pain in the jaw, disturbance of vision, hystero-epilepsy, and hysterical mutism, symptoms of shock and sudden death, cyanosis, dyspnœa, rigidity, convulsive movements of the limbs, unconsciousness, and cessation of respiration. The author suggests that these accidents may be due to (1) coincidence, (2) local anæsthetic, (3) air embolism, (4) spasm of cerebral arteries, and (5) reflex irritation of vagus.

(82) The Aural Complications of the Exanthemata.

Friedberg (*Laryngoscope*, September, 1914) denies that destructive changes in the ear, leading to defective hearing, develop rapidly in the exanthemata. This is frequently taught to be the case. He is of opinion that cases of aural complication of scarlatina, measles, etc., are rarely seen in the very early stages by aurists, and for this reason the damage is already considerable before the patients are placed under specialistic treatment. If the treatment were instituted at an early stage, the resulting deafness would be obviated. Turning to the etiology of aural complication in the infective diseases, he states that he has found a hæmolytic streptococcus in the nose, ear and throat of the majority of cases examined. The diagnosis is often difficult. The most reliable signs are obtained from the characters of the temperature curve and pulse. When other complications are superadded, the diagnostic difficulties are increased. He instances cases in which the symptoms of nephritis simulate cranial implication. In order to prevent the development of aural infection, the nasal secretion should be removed mechanically. The external application of heat may be tried when slight evidence of an exudate in the *cavum tympani* is present. When bulging is present, an incision should be made in the drum. Should the aural discharge continue undiminished for several weeks, he advocates the use of vaccines, local treatment of the naso-pharynx and, in obstinate cases, the mastoid operation.

(83) Sinusitis.

In 1887, Hajek described in detail the anatomy, pathology and treatment of diseased conditions of the nasal sinuses, and this description is accepted by the majority of rhinologists as classical. Hurley (*Laryngoscope*, November, 1914) deals with the same subject, and follows up Hajek's lead by first examining the anatomy and then turning to the development of the ethmoidal labyrinth. He argues that the only certain means of diagnosing suppurative sinusitis is to find pus in the middle meatus. Having demonstrated pus in the middle meatus, he adopts a regular routine. First of all he cleans the meatus out. In the next place, he punctures the antrum and washes this out. If any pus is met with during this procedure, it must be derived from the antrum. In the next place, he passes a probe into the frontal sinus and washes it out. Failing the discovery of pus in this situation, he deduces by exclusion that the pus must come from the anterior ethmoidal cells.

(84) Hyoscin and Morphine as a Preliminary to Local Anæsthesia.

Hurd (*The Laryngoscope*, November, 1914) gives his views on the use of hyoscin and morphine as a preliminary to local anæsthesia. The problems to be confronted in operations on the ear, nose and throat are the banishment of pain and the allaying of fear. For the solution of this difficulty we are indebted to Crile. Hurd points out that nociceptors are most abundant in those parts of the body which in the course of evolution have been subjected most frequently to injuring contacts with the environment. There are specific nociceptors in the ear, nose and throat. As pointed out by Crile, morphine prevents shock. Hyoscin depresses the psychic and motor centre. Hurd's technique consists in blocking the field of operation with alypin, and blocking the special senses with morphine and hyoscin. He has used this method in the ordinary cases which come under the care of the oto-laryngoloist. He injects $^1/_{100}$ gr. hyoscin hydrobromide and $^1/_8$ gr. morphine hypodermically. After thirty minutes, if the patient still shows signs of fear, further injections of from $^1/_{200}$ to $^1/_{100}$ gr. of hyoscin and from $^1/_{16}$ to $^1/_8$ gr. of morphine are given. It takes considerable experience to get the proper degree of narcosis. The advantage of this anoci-anæsthesia is that all shock is avoided. Following the operation the patient should have no remembrance of what happened. In some instances the patient may have some confused memory of having heard or felt something. Extensive operations such as the Killian double sinusitis operation *per nasam*, may be carried out in this manner. He has tried this method in over 100 cases. It is not recommended as a routine procedure. The phlegmatic patient does not require it, and the very nervous subject is not suitable. Between these two extremes the patients for whom this method is suitable will be found.

(85) The Relations of the Tonsil to Thyroid Disease.

Shurley (*The Laryngoscope*, November, 1914) draws attention to the importance of the relation of the tonsil to the thyroid in diseases of that gland. He points out that the laryngologist is frequently consulted to explain and relieve the early neurosis and various symptoms of thyroid disturbance that are referred to the throat. The early stages of atypical hypo- or hyper-thyroidism are usually overlooked. He wished to emphasize the physiological and pathological relations of the tonsils to the thyroid. His attention was called to this subject by the beneficial results of a series of tonsilectomies for the relief of tonsillitis, associated with incipient typical and atypical Graves' disease. Tonsillitis is now recognized as an important etiological factor in incipient exophthalmic goitre. Hence, tonsillectomy may be classed as an important prophylactic measure. He believes it may be possible to abort an early case of Graves' disease. The attention of the physician and the general surgeon is drawn to the complex inter-relationship between the tonsillar ring and the thyroid. In these cases, a special examination of the throat should always be undertaken.

British Medical Association News.

SCIENTIFIC.

A clinical meeting of the Victorian Branch was held at the Melbourne Hospital on February 17, 1915, Dr. A. V. M. Anderson (the Vice-President) in the chair.

Dr. Anderson called attention to the innovation of holding clinical meetings at the hospital instead of at the Medical Society Hall, and explained that each patient would be brought into the room by the attendants singly. The physician or surgeon in charge would give a short demonstration of the case, which demonstration would not occupy more than five minutes. The first patient would be taken into an adjoining room before the second was brought in. After all the patients had been presented, an adjournment would be made, in order to give members an opportunity of examining the patients and of studying the details of the various cases. It was proposed to hold the discussions in the room set aside for the meeting, but this proposal was abandoned on the occasion of the first meeting, because the number of patients to be examined was large, and consequently, the hour was advanced before the examinations had been concluded. Some discussion took place at the bedsides, but a record of these discussions is unfortunately not available.

(1) *Neurosis with Trophic, Atrophic and Multiple Malignant Involvement of the Skin.*—Dr. A. W. F. Noyes demonstrated a patient, a male, aged 41, a clerk. The family history was good, but his father and mother were first cousins. When a child, the nails of the fingers and toes were cast, and had not been restored. At the age of 19 the fingers began to contract with cicatricial and atrophic changes, incapacitating the patient from his work. The changes continued until a claw-like atrophic condition had been produced. No history of syphilis was obtainable. Four years previously an ulcerated condition was noted, commencing as an indurated mass, appeared on the dorsum of the right foot. This mass and the glands in the groin were excised. In 1913 a similar condition appeared on the palmar aspects of the right hand, and was excised. On admission, three ulcerations existed, one on the outer side of the left knee, another in front and below the right knee, and the third in the lumbar region. The largest, that below the left knee, was about 2½ inches in diameter; the shape was irregular, with firm, everted edges, with a fungating red and purulent base. All three areas were excised; those in the neighbourhood of the knees were skin-grafted, but the grafts had not taken. X-ray were applied for a period of six months before the operation. Besides the ulcerations (which were epitheliomatous), there existed at that time the claw-like contraction of the hands and atrophy of the tissues in the neighbourhood, similar to that seen in nerve leprosy. There was no thickening in the nerve trunks supplying these parts. There was a considerable amount of eczema in the vicinity. The skin over the whole surface of the body became hyperæmic, inflamed and blistered, and excoriated on the slightest friction. Sensation appeared to be normal. Thermal and tactile sensation was normal on the left hand and forearm, but on the right hand, on which a thick graft had been implanted two years before, there was some deviation of the thermal sense. Microscopically, two of the ulcers were found to be epithelioma (a section with nest formation was exhibited). No acid-fast organisms were found in the serum taken from hyperæmic skin of the hands. The Wassermann test was negative. Dr. Noyes raised the questions of the type of the neurosis, with its definite trophic and atrophic changes in the skin and underlying tissues; whether any leprosy was present, in view of the hands having all the appearance of the leper claw; and whether any pathological relationship existed betwen the multiple malignant growths and the concomitant condition.

(2) *A Hydatid Abdominal Tumour.*—Dr. Konrad Hiller showed a case of tumour of the abdomen in a man aged 56. The patient had felt a lump in the left side of the abdomen for 15 or 20 years, but it had caused little inconvenience. Six months before he had fallen on the pavement and had struck his abdomen. He was admitted to the Melbourne Hospital suffering from severe abdominal pain. The enlargement of the spleen was noted, and five days later he left the hospital at his own request. According to the patient's statement, the lump had increased in size. The tumour appeared to be globular, was tense, centrally placed and was about 10 to 12 inches in diameter. Fluctuation could be felt, but there was no thrill. Resonance could be obtained all round it. The edge of the spleen were felt 2½ inches from the costal margin. There was a dome-shaped dulness at the base of the left lung posteriorly, extending as high as the angle of the scapula. X-rays revealed a shadow in this region, suggesting a hydatid of the lung. The tumour in the abdomen was probably a hydatid which had grown in six months. It was questionable whether the spleen also contained a hydatid, or was pushed down by the hydatid of the lung.

(3) *Osteitis Deformans (Paget's Disease).*—Dr. E. R. Cordner's patient was an athletic man, aged 50. He had been healthy, and denied having had syphilis. The Wassermann test was negative. He first noticed a bowing in the right tibia 13 years previously. He had fallen and fractured his right patella. Two years later he fell again and injured the right ankle. Up to four years before, the bowing gave him no trouble, but the knee trouble caused him to limp. The left tibia became curved forward and outward to a slighter extent. The right femur was in a similar condition. There was also a slight dorso-cervical kyphosis. Within ten years he had lost two inches in height. His skull had increased in size, but he had never noticed it, as he wore the same sized hat as formerly. A marked increase in thickness and solidity of the bone of the skull was discovered radiographically. When he lay on the back the right lower limb rested on the right heel and pelvis. When he stood up with his heels together, the outward bowing of the legs caused the knee-joints to be four inches apart. The chin also protruded forward. The right ulna was also markedly thickened and bowed. The skull, by measurement in comparison with the normal skull, showed an increase of about one inch in circumference.

	Normal. in.	Patient. in.
Circumference round head at mid-temporal fossa	21	22
External occipital protuberance to base of nose	13¼	14
Mastoid to mastoid over vertex	15¼	16

Corresponding measurements in Paget's original case were 26½, 15 and 18 inches. X-ray pictures of long bones showed great bowing, with deposit of heavy bone at the periphery, and rarefication near the centre. That of the skull showed great increase in thickness in both parietal and occipital regions.

(4) *Cystic Tumour of the Knee.*—Dr. T. H. Boyd gave the details of a woman, 60 years of age, who had had a pain in the left tibia for three years, followed later by a pain in the right tibia, and a swelling below each knee. She was able to get about for the first 28 months, but not since. Her previous health was good; she had had no illness except influenza. On examination, there was marked cystic disease at upper end of the left tibia and to a less degree of the right tibia. X-rays revealed a cystic condition of the heads of both tibiæ and lower ends of both femora. No report had yet been received of the Wassermann test. The blood count showed 10,000 leucocytes. Lymphocytes were found in the fluid from the cyst in right tibia.

(5) *Symmetrical, Pigmented Hypertrophy of the Areolae.*—Dr. W. J. Denehy showed a case of symmetrical enlargement of the parts under the pigmented areas around both nipples. The patient was one of a girl aged 15 years. She had noticed a swelling around each of the nipples for two months. The mammillæ were normal, and were situated on the top of the swellings. There were no other symptoms, except some dysmenorrhœa during the previous five months, that is, during the whole time she had menstruated. She had had influenza in February, 1914, and a fortnight later acute rheumatism. The swellings came on without obvious cause, and the question he would like determined was whether they were due or related to the menstrual condition or not. At any rate, it was a curiosity. The

swellings were of the size of a hen's egg, not solid; they appeared to be filled with gas. They were not painful. They diminished in size with cold weather, and were easily pressed back on to the breast. The surrounding tissues were highly pigmented.

(6) *Tuberculosis of the Knee-joint.*—Dr. T. E. L. Lambert showed the knee of a girl, aged 13 years, who had slipped and injured her right knee two years before. Nine months later she had fallen off a bicycle and injured the same knee. The joint was swollen and very painful. It had been placed in plaster of Paris for five months, and the patient walked about. For the past six weeks she had not been able to walk at all, on account of pain. She complained of starting pains at night and night sweats. Her appetite was good. There was a marked wasting of the muscles above and below the joint. There were no pathological conditions present in the other joints.

(7) *Ankylosis of the Hip, Treated by Murphy's Arthroplasty.*—Dr. Lambert showed another case—that of a girl aged 22 who had had a bony ankylosis of the left hip-joint, and had had an arthroplastic operation by Murphy's method with good result. Although the leg was only recently out of the plaster, it could be voluntarily moved through an arc of 35 degrees, and permitted of slight rotation. This case attracted a large amount of attention, and all were struck by the large amount of movement already restored to the long disused limb.

(8) *Loose Bodies of the Knee-joint.*—Dr. J. F. Wilkinson showed a case of loose bodies in the knee, and sought advice as to whether they should be left or excised. The patient was a woman, beyond middle age. For the past 10 or 12 years she had had rheumatoid trouble in the knee. The joint swelled up under the influence of cold or movement. If she walked, the joint would "nip," and she was compelled to lie up again. One or two movable bodies could be felt and others could be seen in the skiagrams. He questioned whether the knee should be opened and the bodies removed or be left in splints and the woman have a permanently stiff joint.

(9) *Pernicious Anaemia.*—Dr. Wilkinson also exhibited a film of blood under the microscope. This was taken from a case of pernicious anæmia. The film showed a very marked variation in the size of the red corpuscles, with very large and very small corpuscles, and much granular degeneration and vacuolation of the red cells and large nucleated red cells.

(10) *Abdominal Aneurysm.*—Dr. W. R. Boyd showed for Dr. R. H. Strong a case of abdominal aneurysm in a woman. There was a pulsating tumour in the epigastric and left hypochondric regions. The condition was rare in women; it occurred ten times more frequently in men, and aneurysm was ten times more frequent in the thoracic than in the abdominal aorta. Dr. Boyd pointed out that there was an unusually long history, the patient declaring that the pulsation had been felt for three years. Further, there had been no pain. The patient's age was 68, and the blood pressure was 200. These facts might constitute sufficient evidence to exclude abdominal aneurysm, but physical examination warranted the diagnosis. There was no evidence of any specific infection, and the result of the Wassermann test was not yet known.

(11) *Huntington's Chorea.*—Dr. R. R. Stawell showed a case of Huntington's chorea in a woman—R.G., aged 40 years. In the case were exemplified the four features which were to be recognized as peculiar to the disease: (1) Slow choreic movements. (2) The onset of the disease in an obvious form in adult life. (3) The hereditary nature of the condition, and (4) a definite tendency to mental change, insanity and even suicide. As regards the choreic movements, Osler had suggested that the movements were always slower than in the ordinary or Sydenham's chorea; this contention could not be entirely supported, as in many cases of Sydenham's chorea the involuntary movements were unusually slow. In this particular case the movements were characteristic of the classical description of the disease. The onset of the disease occurred six years before, and followed upon an accident in which some scalp wound occurred, and in which concussion of the brain had been produced. On general neurological examination there was no indication of any gross involvement of the Rolandic area or cranial nerves. Apart from the irregular movement of face and of upper limbs (movements which ceased during sleep), there was a great weakness of the legs, so that the patient walked with a feeble, staggering gait. The patient herself regarded her mental condition as good, though her friends and guardians have noticed that she has attacks of acute mental depression and irresponsibility. Recently she had become restless, and had suddenly left the convent, which had been her home for some years. She had been found wandering by the police, and had been brought to the hospital. The family history showed that the mother of the patient had suffered from the same conditions, and had died in the Kew Asylum. One brother had suffered from a condition similar to this so-called "chronic progressive chorea." Dr. Stawell said that he proposed to investigate the condition of the cerebro-spinal fluid, as to both its cell content and Wassermann reaction. He thought the conditions of Huntington's chorea must be comparatively uncommon in Victoria, as he could not recall having seen a similar case. During the demonstration of the case, Dr. Ernest Jones, Inspector-General of Asylums in Victoria, said that such cases were not very uncommon in the asylums, and that a paper had been published in Melbourne on the clinical features of the condition. Dr. J. R. Major (of St. Kilda) had notes on the family type of progressive chorea.

(12) *Trophic Lesions of the Hands and Feet.*—Dr. Sydney Pern showed a case of trophic lesions on the hands and feet. The patient was a man, aged 28, with a specific history of five years. The Wassermann reaction was positive. Eighteen months before his hands and feet began to get very cold and hard. The whole skin of the body was tight, drawn and of a hard nature. The patient had received thyroid treatment without much benefit. Since then he has been treated with salvarsan injection and electricity.

(13) *Dentigenous Cyst.*—Dr. W. Kent Hughes showed a case of dentigenous cyst. A girl, aged 19 years, had had a discharging sinus in upper jaw for eight years. There was a hole in the canine fossa of about the size of the tip of a little finger. The front wall was quite thin and of the egg-shell type. A strong membrane lined the cavity, which was about the same size as the antrum in an average specimen. The antrum was displaced upwards, and was much smaller than that on the right side. The cavity encroached a little on the aveolar portion of the superior maxilla.

(14) *Pulmonary Tuberculosis Treated by Artificial Pneumothorax.*—Dr. Vera Scantlebury showed for Dr. S. V. Sewell a case of artificial pneumothorax. The patient, who was 26 years of age, had suffered from tuberculosis of lung on left side for 18 months. Five months before the treatment of artificial pneumothorax was begun. She had received eight injections of nitrogen into the left pleural cavity. From that time she had lost all her old symptoms of cough and persistent fever at night, and she was much improved in general health. She had only an occasional night sweat. The injections caused but slight and transitory inconvenience to the patient.

Dr. W. G. Dismore Upjohn showed the following pathological specimens:—

(15) *Dislocation of the Stomach into the Pleural Cavity.*—The left lung, pericardium, diaphragm, stomach, duodenum, spleen, pancreas, transverse and descending colon, and left kidney were hardened in the positions in which they were found at autopsy. The subject was a male, æt. 28, who had good health till eight months previously, when he suffered from empyema thoracis on the left side. The empyema was drained, and recovery took place. About two months later he began to suffer from vomiting and other gastric symptoms. Duodenal ulcer was suspected; laparotomy was performed. At the operation the stomach and duodenum were carefully examined, but nothing abnormal was detected. The appendix was removed, and for a few weeks he was relieved from his gastric symptoms, but later his symptoms returned; he could retain no food, and he rapidly wasted and died.

At autopsy there were general pleural adhesions, the stomach could not be found in the abdomen, but occupied a

false sac in the left pleural cavity, having made its escape through a transverse slit in the diaphragm about 3 cm. in length. The left extremity of this aperture was adherent to the scar of the thoracotomy wound, and it seemed probable from its appearance that the slit resulted from trauma during the thoracotomy. A radioscopic examination of the stomach, after a barium meal, has been made with the patient in the erect posture prior to the laparotomy, but its position did not appear to be abnormal.

(16) *Syphilis of the Colon.*—Tumour of the colon of an old female Queensland aboriginal. Macroscopically, the appearances resemble those of malignant disease, which is rare in aboriginals. Microscopically, the tumour and adjacent enlarged lymphatic glands proved to be syphilitic. At the autopsy there were other signs of syphilis and chylous ascites.

(17) *Malignant Disease of the Bladder.*—Nodular tumour of the trigone of the bladder in a male aet. 72 years, causing death by hæmorrhage. The prostate was healthy. Microscopically the superficial parts appeared carcinomatous, the deep parts sarcomatous.

(18) *Spindle-celled Sarcoma of the Plantar Skin.*—Tumour of the sole of the foot of an old man, clinically resembling epithelioma, but found on section to be a spindle-celled sarcomatous growth, with a few scattered grey areas. There was an extensive involvement of the inguinal lymphatic glands, the majority being fleshy and white, but two being occupied entirely by slate-grey growth.

A meeting of the South Australian Branch was held at the Lister Hall, Adelaide, on February 25, 1915, Dr. E. W. Morris, the President, in the chair.

Dr. Morris demonstrated a case of *cancer en cuirasse*. The patient was a woman aged 45 years. The growth had started in the left breast, and later had spread to the right breast; the neck, axila and surrounding tissue on the left side were involved. There was œdema of the left arm.

Dr. R. E. Harrold presented a man, aged 62 years, who was suffering from extensive *lichen planus*. The onset of the condition had been sudden. He was being treated with large doses of arsenic with beneficial results.

Dr. Harrold also showed a case of *dermatitis herpetiformis*. The patient was an old lady, aged 74. The affection had lasted for three years, and affected the trunk and extremities. There were typical small herpetic bullæ and blisters in grouped formation. She suffered considerably from pruritus. Arsenic was given in increasing doses, and considerable improvement had resulted. The affected parts were covered with powdered talc.

Dr. C. E. Todd showed a man, aged 20 years, who was suffering from *traumatic epilepsy*. The skull had been trephined in the left parietal region for a depressed fracture. The fits continued, and he therefore turned down a flap, and enlarged the old trephine opening, by two fresh trephine holes. The *dura mater* over the whole area of exposed brain was incised and removed. A flap of fascia from the thigh was transplanted to cover the cerebral cortex. The wound was then closed. Only one fit had taken place since the operation, but the mental impairment still remained. Dr. Todd pointed out that it was wise to prepare the fascial flap before opening the *dura mater*. It should be quite free from fat.

Dr. H. M. Jay showed a man from whom a large orbital tumour had been removed. The tumour was probably lipomatous in nature.

Dr. Hone showed a specimen of *arrested development of the uro-genital system*. The type of defect included imperforate anus, and apparent absence of external genital organs. The first child of the parent was an anencephalic monster.

MEDICO-POLITICAL.

A meeting of the South Australia Branch was held in the Lister Hall, Adelaide, on February 25, Dr. E. W. Morris, the President, in the chair.

Dr. Poulton moved:—

> "That in view of the evidence emphasizing the dangers to our troops from excessive alcoholism, so constantly coming before us, and hoping to exert influence towards temperance among them, members of this Branch of the British Medical Association are of opinion that in the present national emergency medical men will do well to become and remain total abstainers during the continuance of the war."

He said that he had been recommended at a meeting of the Council to submit this resolution to the members. Otherwise he would not have approached such a weighty subject on his own initiative. After alluding to the stupendous issues at stake, he emphasized the fact that the military forces of the Australian States formed the most important element in the Commonwealth. Soldiers in the making, without long training, lacking regimental traditions, could only maintain that standard of efficiency which was demanded and expected of them by exercising all the qualities of good soldiers. He claimed that Australians were able to form a sound opinion in regard to the morale of the army, and stated that there could be no doubt that temperance was very desirable. It had long been notorious that a section of the enlisted men was intemperate. Disquieting episodes following the Boer War were still remembered. In the present gathering of the forces in Australia and in Egypt much had happened that pointed to excessive drinking of alcohol among some of the men. It was said that hundreds had already been sent back, broken and useless. He feared the bad influence of this example on the sound and temperate majority, and was anxious in regard to the standard of efficiency.

He recognized that those who stayed at home and for whom the good Australian soldiers were working and fighting had no right to debate matters of discipline or to dictate to the army, but they could do something personally by way of example and encouragement. He was no advocate for a teetotal army, but insisted on a temperate army. He held the opinion that a good influence would be exerted on recruits and soldiers if the medical profession generally throughout the States would let the army know that their welfare was constantly remembered, by becoming and remaining total abstainers until the termination of hostilities. The soldiers were making great sacrifices for those at home; let those at home exercise self-denial as an encouragement. He held that this action would be the more forcible, if it were taken by a body of men fully cognisant of the value of temperance. In conclusion, Dr. Poulton referred to the opinion expressed by the late Lord Roberts, by Lord Kitchener, by Sir Thomas Barlow, by Sir Clifford Allbutt and by others under the guidance of the Archbishop of Canterbury.

Dr. C. E. Todd seconded the motion. He said that they were all aware that the force of example was one of the strongest of moving principles, and he trusted that many would follow their example. They were of opinion that it would be unreasonable to expect others to abstain from alcohol during the war unless they were prepared to do this themselves. In addition, he thought that a good opportunity had presented itself to demonstrate to the public the attitude of the medical profession in this important matter.

Dr. W. T. Hayward recognized the evils that had been so graphically depicted, and appreciated the motives which had prompted Dr. Poulton to bring forward the motion. He could not, however, believe that the course suggested would have any beneficial effect in checking intemperance among the troops in Egypt or Australia. If the members of the Association were brought into close contact with the men, he believed that some benefit might accrue. He considered that the pious opinion expressed in the motion would be absolutely futile. He moved "the previous question."

Dr. Lendon seconded the "previous question."*

Dr. Lendon stated that he was very sorry to disagree with Dr. Poulton. It appeared to him that Dr. Poulton, although acting with the best intentions, was ill advised. He was of opinion that no good would result from the adoption of the motion.

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* In the minutes of the meeting it is recorded that Dr. Hayward moved an amendment in moving the "previous question," and that Dr. Lendon seconded the amendment. Dr. Lendon spoke to the amendment. With some diffidence, we venture to call attention to an article on "Procedure at Meetings," published in the *Medical Journal of Australia*, March 6, 1915, p. 222, from which it will be seen that according to the accepted rules of parliamentary debate, the closure, the "previous question," and the motion "that the question be now put," are not amendments, and when proposed and seconded must be put to the meeting without any further discussion.

Dr. Hayward's motion was put to the meeting and negatived.

Dr. Gault said that it was the first time in his life that he regretted being a total abstainer, for he could claim no credit in voting for a resolution which meant to many an act of self-sacrifice. It is the nature of an Englishman to hate compulsion, and what other nations effected by this means, England sought to accomplish by precept and example. The example of medical men would have a great influence, and if this were followed by that of the military officers, and of leading laymen throughout Australia, the good name of the great Commonwealth would be preserved and her glory enhanced by the distinguished service of her sober and temperate army.

Dr. J. C. Verco was surprised and pleased to see the motion on the agenda paper. It was quite a legitimate proposition; it was an expression of opinion, which would not bind any individual to abstain. It did not require the signing of a total abstinence pledge by anyone. He did not think it wise to minimize the fact of intemperance among the troops. It was pathetic to see young men in uniform drunk about the streets and in the cars. It was a disgrace to them, and a greater disgrace to those who with a false patriotism helped to make them drunk. The evil existed, and should be removed. It would sully the fair name of the Commonwealth and reduce the value of the fighting men. He was of opinion that the resolution, if passed, would do good. A leaflet setting forth the evil effects of alcohol upon the capability and morality of soldiers might carry some weight, but it would be but a feather-weight in comparison with a voluntary abstention on the part of the medical man for the purpose of emphasizing the evil in the case of soldiers and of sympathizing with them, in the self-denial asked of them. He thought that the effect of the resolution would be the stronger because it had not emanated from a total-abstinence society, and had not been suggested or engineered by total abstaining members of the Association. He had learned that 1,700 of the 14,000 men who had gone from the Commonwealth had signed the pledge. The resolution would stiffen the determination of these 1,700 men, and it would strengthen the hands of Kitchener in his plea for sobriety in the army. He hoped that the meeting would carry the resolution.

The President, in supporting the motion, emphasized the value of example in conditions like the serious one under discussion. He hoped that the effect would be more wide-reaching than those who had spoken against it anticipated.

Dr. R. E. Harrold opposed the motion, while admitting its good intent. He doubted if any good would come from the self-denial of the members. Many thousands had left Australia, and when the real business of the war was on, alcohol administered in small quantities would do them no harm, and might do them much good. There were bound to be black sheep in every fold, and the whole should not suffer for the vagaries of a few. If the motion were carried he would abide by it. He felt that if a sacrifice had to be made it should be a real one, and suggested that the money, ordinarily spent in alcohol, should be devoted to the funds inaugurated to assist the Belgians. As it would be no sacrifice to the total abstainer he or she should pay double the amount.

Dr. H. M. Jay said that he was of opinion that the proposal would only influence the more thoughtful members of our forces; men who at the critical period had brains enough to realize for themselves the dangers of alcoholic excess. It was doubtful whether real drinkers were enlightened enough to profit by the proposed example.

The motion was put to the meeting and carried.

Dr. W. A. Verco moved that the resolution be printed and sent to the lay press, the medical press and all medical members of the S.A. Military Forces, both at home and abroad.

The motion was seconded by Dr. J. W. Browne, and carried.

Our attention has been directed to the fact that during the period since the outbreak of war various changes have been rendered necessary among the office-bearers of the South Australian Branch. In the list of members published as a Supplement to the *Medical Journal of Australia*, February 27, 1915, the office-bearers elected at the last annual meeting prior to December 31, 1914, were named. Appended below is a list of those holding office at the present date, and of those serving on the various committees.

President:
Dr. E. W. Morris, Port Adelaide.
Vice-President:
Dr. J. Corbin, Adelaide.
Ex-President:
Dr. B. Poulton, Adelaide.
Hon. Secretary:
Dr. Henry S. Newland, Adelaide.
Hon. Treasurer:
Dr. W. A. Verco, Adelaide.

Council:

Dr. B. Poulton.	Dr. W. T. Hayward.
Dr. E. W. Morris	Dr. A. F. A. Lynch.
Dr. F. S. Hone.	Dr. B. Smeaton.
Dr. F. Steele Scott.	Dr. J. Bonnin.
Dr. de Crespigny.	Dr. A. C. Magarey.
Dr. R. J. Verco.	Dr. W. A. Verco.
Dr. R. Brummitt.	Dr. S. L. Dawkins.

Dr. A. C. Magarey is Acting Hon. Secretary during Dr. H. S. Newland's absence at the war.

Drs. R. J. Vercoe, W. A. Verco, S. L. Dawkins, and R. Brummitt have been elected to fill the vacancies of Drs. H. A. Powell, J. Corbin, T. G. Wilson and H. S. Newland, who have been granted leave of absence during their absence at the war, as members of the Council.

Sub-Committees:—

Scientific Meetings Sub-Committee.

Dr. W. T. Hayward	Dr. B. Poulton	Dr. W. A. Verco
Dr. R. J. Verco	Dr. C. de Crespigny	Dr. A. C. Magarey

Ethical Contract Practice and Services Sub-Committee.

Dr. E. W. Morris	Dr. A. F. A. Lynch	Dr. S. L. Dawkins
Dr. B. Poulton	Dr. J. Bonnin	Dr. B. Smeaton

Medico-Political and Public Health Sub-Committee.

Dr. W. T. Hayward	Dr. R. Brummit
Dr. E. W. Morris	Dr. F. S. Hone

The President and Hon. Secretary are ex-officio members of each committee.

The Executors of the estate of the late Sir Normand MacLaurin have presented to the New South Wales Branch of the British Medical Association the following volumes from the library of that distinguished member of the profession. These books will constitute a valuable addition to the Library of the Branch.

Anatomie pathologique, par Lancereaux (1871).

Atlas de l'anatomie pathologique, par Lancereaux et Lackerbauer (1871).

Anatomy of the Breast, with plates, by G. Childs and J. Holt, by A. P. Cooper (1840).

Structure and Diseases of the Testis, by A. P. Cooper (second edition, 1841).

Text to Photographs of Variola, Discrete Small-pox, by Ashburton Thompson (Sydney, 1884-1886).

Leçons cliniques sur maladies chroniques de l'apparcil locomoteur, par Bouvier (1858).

Pathology of the Human Eye, by John Dalrymple (with 36 plates, London, 1852).

Traité complet des maladies vénériennes, par Phillipe Ricord (Paris, 1851).

Medical Anatomy: Internal Organs; position and movements, by Francis Gibson (1869).

Eighty-seven plates for Richard Quain's *Anatomy of the Arteries*, by Joseph Maclise (London, 1844).

Anatomical Tables of Bones, Muscles, etc., of the Human Body, with explanations; additional plates, by Bedloo, Haller, Duvernez, etc., by Bernard Selfried Albinus (New Edition, 1827, from original work published in 1747).

Surgical Anatomy, with 52 plates and explanations, by Joseph Maclise (London, 1856.)

List of Members: A Correction.

The Honorary Secretary of the New South Wales Branch regrets that the name of—

Dr. W. M. Mecke, Rockdale,

was inadvertently omitted from the list of members of the Branch published in the *Medical Journal of Australia* (Supplement) of February 27, 1915.

The following have been nominated for membership to the New South Wales Branch:—

Dr. Charles Herbert Wesley, Royal Prince Alfred Hospital.

Dr. William Henry Donald, Royal Prince Alfred Hospital

Dr. Robert J. Nixon, Royal Prince Alfred Hospital.

—o—

Medico-Legal.

THE LADIES' COLLEGE OF HEALTH.

On August 4, 1914, the Board of Health recommended his Excellency the Governor of New South Wales to prohibit advertisements and the sale of the rememdies of the Ladies' College of Health, on the following grounds:—(i.) **Orange Lily Suppositories.** These vaginal suppositories or pessaries are gelatine capsules, containing boric acid and alum, with a small proportion of opium alkaloids, and some cacao butter. They are recommended as a special treatment for young girls, and as a substitute for surgical treatment by doctors for tumours and other ailments. Dr. Ralph Worrall, to whom the treatment was referred, expressed the opinion that the business carried on by the firm was false, misleading, and a fraud, and the use of the Orange Lily Suppositories injurious to those applying them. (ii.) **Blood and Liver Powders.** These powders were found by the Government analyst to consist of sugar of milk, with traces of mercury and minute traces of strychnine. (iii.) **Kidney Tablets.** These consist of sugar of milk. (iv.) **Mother's Cordial or Herbal Tonic.** The Government Analyst found the tonic to be a mixture of chopped herbs similar to many others used for procuring abortion. An exact analysis was impossible, but rue, savin and pennyroyal were found. The Board of Health expressed the opinion that the remedies were inefficient for the purposes advertised, and actually injurious to the health. The prohibition under the provisions of section 20 of the Pure Food Act, 1908, was therefore recommended.

Objection was taken by the manager of the New South Wales Branch of the Ladies' College of Health to the issue of the prohibition, and the appeal against the determination was heard by Judge Murray on November 22, 1914, and thirteen subsequent days, the hearing ending on December 14, 1914. A considered judgement was read on January 8, 1915. The appeal was heard in private, but in view of the importance of the case, and the findings of the Judge, permission has been obtained to publish a record of the case in this Journal. On February 10, 1915, the prohibition appeared in the Government Gazette (see *Medical Journal of Australia*, February 20, 1915, p. 170).

The appellant called 37 witnesses, three of whom are described as experts in chemistry and herbal analysis, 31 were women who had received the treatment, and spoke of its apparent beneficial effect, and 3 were husbands of women who had used the treatment. It is unnecessary to enter into the details of the evidence given for the appellant. A general summary will suffice. The so-called experts challenged the accuracy of the analyses made by the Government analysts, but as was clear from the Judge's remarks, failed to establish the points. The female witnesses spoke of the benefit received from the treatment, but the value of the evidence is admirably summed up by the Judge in terms reproduced below. The evidence of the three husbands, one of whom was the manager of the business, was of small value to the case.

This evidence occupied the first six days of the hearing. The remaining days were taken up by the hearing of the evidence of the 25 witnesses for the Board of Health. This evidence occupies 300 pages of foolscap, and in view of its voluminous nature can only be summarized very briefly.

The first witness was Dr. J. B. Cleland, Principal Government Microbiologist. From his evidence it appears that specimens of masses passed *per vaginam* after the use of the Orange Lily Suppositories or Pessaries, were examined, and these masses were found to consist of exfoliated epithelium, and in one case shreds of mucous membrane, with uterine tubules, together with blood clot, entangled glucosides, and some fragments of extraneous vegetable matter. No traces of a tumour or of anything like a polypus were found. He recognized that a concentrated solution of alum might have the effect of excoriating the vaginal epithelium and act as an escharotic. He was examined at great length on the justification for certain claims made in the pamphlets published by the firm, when regarded from a physiological point of view.

The next witnesses were the Government analysts. In regard to the suppositories, it was shown that each weighed about 2.86 grammes, and contained 30% of alum and 17% of boric acid. In addition there was about 5% of opium, some fatty matter, and an excipient. No other active ingredient was present. Hydrastin was not found. In regard to the Mother's Cordial, which was a box of herbs, fragments of flowers, leaves, stems, lumps of resin, and particles of powdered roots were found. Savin, rue and pennyroyal were detected by the odour. After distillation, the residue was found to contain alkaloids, glucosides, and resins. One alkaloid was judged to be hydrastin. Couch grass, canella bark and gentian were also found. One of the analysts expressed the opinion that lobelia flowers were also contained. The analysis of a coloured ointment described as the *serate massage* revealed sulphate of quinine and salicylic acid. No belladonna was found, but on the box a statement was printed claiming that 0.00485% of extract of belladonna was present. The analyst doubted whether so small a trace could be detected.

Dr. Renzo Rosati, of Gunning, gave evidence concerning one of the patients treated with the suppositories. Dr. John McPherson, of Waverley, spoke of a patient suffering from pyosalpinx, who had been treated with the suppositories, and who had brought him a bottle full of vaginal casts which had come away after the treatment had been applied. He expressed the opinion that pyosalpinx at times subsides spontaneously. The casts shed were the result of some caustic irritant. He stated that the claim that the pessaries could rectify displacement and remove tumours, etc., was a physical impossibility. He was cross-examined on the effect of varying concentrations of alum on the vaginal mucosa. He was also examined as to the effect of hydrastis when applied locally to the uterus, and also when given internally.

Dr. H. L. A. Shorter gave some evidence in connexion with a case of retroversion in a neurotic patient.

Dr. Ralph Worrall, of Sydney, stated that many of his patients had used Orange Lily Suppositories. He had seen casts of the vagina on several occasions. The vagina, after the casts had been removed, was raw, and covered with punctate hæmorrhages. The removal of the mucous membrane was dangerous, inasmuch as infection could occur through a raw surface, but not through the intact mucosa. He would swear that the action of the suppositories was caustic. He traversed several of the statements in the book published by the firm. He gave evidence as to the serious effect of applying an irritant in a case of cancer, and postponing the operation. Early operation was the only known cure for cancer. Cancer could not be diagnosed by correspondence. The claim to do this was an absolute fraud on the unfortunate patient. He spoke indignantly of the suggestion in the book that the suppositories should be applied to young girls. It was iniquitous. The evidence given was full and direct, and emphasized the serious objections to treating young girls in this manner, especially for irregular menstruation. The statements made in the book on suppression of menstruation were the reverse of the truth. Amenorrhœa was not due to local changes, but was often a conservative phenomenon. In regard to leucorrhœa, he stated that it was madness and culpable to treat this symptom as if it were a disease. In one place in the book it was stated that itching was a good sign. Dr. Worrall pointed out that itching is a sign of inflammation, and when it follows the application of a remedy, it is an indication that the remedy is doing harm. Numerous other statements which were printed in the book were proved to be quite untrue. If one woman said that the substance that came away was like a piece of liver, it must have been coagulated

blood. The advice to give the treatment a trial violated two essentials. The first was that diagnosis should always precede treatment, and the second, that no injury should be inflicted on the tissues. The rest of the very lengthy examination and cross-examination elicited a number of facts in regard to the physiology of the vagina, uterus and ovaries, and to the effect of drugs on these organs. The cases treated by the Orange Lily and other remedies were put to the witness for an explanation of the apparent or alleged beneficial effect, and in each case a reasonable explanation was given.

Dr. George Armstrong gave evidence in connexion with the condition of certain patients treated by him, and later treated by the Ladies' College of Health. The effect of the treatment was imagined. He was then examined as to the truth and reliability of the statements printed in the book published by the firm. His evidence agreed with that given by Dr. Worrall, and he too was particularly emphatic on the harm done by tampering with young girls by inserting pessaries into the vagina for menstrual disturbances. Like Dr. Worrall, he gave evidence on the utility of curetting in suitable cases. He contradicted many of statements made in the book.

Dr. J. C. Roberston denied that the treatment could cure chronic metritis. Any improvement which may have taken place in a patient referred to, would be due to an improvement in her general condition of health. The cross-examination did not succeed in weakening his view of this case.

Dr. H. C. Taylor Young, of Sydney, spoke of two patients he had examined after the Orange Lily treatment had been applied. In the one case the vaginal mucosa was red and raw. It was unhealthy. He deplored the removal of the vaginal epithelium. In the second patient there was a large ovarian cyst, which had not been affected by the treatment. The witness gave evidence on the erroneous and injurious statements in the book. He was of opinion that the appellants were obtaining money under the pretence that they could procure abortion by means of their remedies. The drugs used would not have that effect, but in large doses they might prove very dangerous. He also said that young girls should not be taught about sexual matters in the way suggested in the book. He, like many other medical witnesses, was questioned closely on the possibility of the treatment removing sterility. The evidence went to show that this was impossible. Dr. Taylor Young gave a rational explanation of the improvement alleged to have been derived from the treatment. Following him, Dr. C. V. Bowker, of Sydney, also gave evidence. He described the case of one of the patients, who was said to have passed a large tumour after the application. He stated that she did not have a tumour of any sort.

After several other practitioners had given evidence, including Dr. S. H. McCulloch, who was in the witness-box for a considerable time, Dr. A. A. Palmer, First Government Medical Officer, was called, and gave evidence on the physiological and general therapeutic aspect of the conditions stated to have been treated. The effect of his evidence was to confirm the evidence given by the other medical witnesses.

In his reserved judgement, his Honour arrived at the following conclusions:—"The report appealed against is a correct statement of the facts." "Mr. Percival Stewart Garling is now general manager in Australia of the business known as the Ladies' College of Health, in succession to the late Mr. H. Alexander. The manager does not profess to have any expert medical or surgical knowledge or experience. The vaginal suppositories or pessaries are the real foundation of the treatment of the College. It is possible that, but problematic whether, they contain in addition to boric acid and alum and opium alkaloids, a trace of hydrastis or hydrastin, and perhaps some other herbal drug. But it is certain that their effect and intended effect is to act as an escharotic on the epithelium of the vagina. The patient . . . misinterpreting the appearance . . . believes that she is being relieved of tumours or growths of the uterus, or Fallopian tubes or ovaries. . . . Growths existing in or about the organs of generation cannot thus be removed, being in most cases curable only by a surgical operation. The refraining from or delay in consulting an expert, occasioned by the belief in the efficacy of this treatment, actually injurious in itself in various ways, and tending to facilitate the entrance of septic germs into the circulation may, for instance where cancer in the cervix has begun, lead to fatal consequences that might otherwise have been avoided. The application of any such treatment to young girls, except under the direction of a medical man, after careful diagnosis, cannot be too strongly condemned, and is physiologically and morally dangerous."

His Honor was satisfied that the casts consist substantially of vaginal epithelium only. Although a comparative unimportant part of the case, the cost of the treatment was enormously in excess of the cost of production. The statements made by Dr. Worrall in evidence confirmed the statements made in the report as to the value and dangers of the treatment.

The Blood and Liver Powders probably had little value, and the Kidney Tablets were absolutely ineffective. In regard to the Mother's Cordial and Herbal Tonic, "the independent examination of these chopped-up herbs made by three experts called as witnesses on behalf of the appellant show such remarkable divergence in the nature of the ingredients as to suggest that the mixture is probably of a very haphazard description. It is certainly . . . an example of the old exploded practice known as polypharmacy. I conclude that it is not intended to, and practically cannot, operate as an abortifacient. I doubt whether the mixture does contain rue, savin or pennyroyal."

Before concluding, Judge Murray explained the grounds of his conclusions. It was obvious that the College of Health was a commercial undertaking, originating in the United States of America, of enormous extent, and bringing in very large profits. Any particular collection of even some hundreds of persons who had used the system would form but a small fraction of the whole. There was the possibility that the treatment had failed in scores of thousands. In nearly all instances the very fact that women had made such an experiment unsuccessfully would deter them, out of shame and dread of notoriety, from coming forward.

His Honor was inclined to regard these women witnesses as honest, and "not unintelligent narrators of facts, in which they fully believed. But defective recollection, with a strong, though unconscious, inclination to promote the value of their testimony, acting on the minds of women generally of a neurotic nature, and inclined to connect mere accidental coincidences as cause and effect, goes far to explain how it is that honest witnesses calmly depose to apparently almost miraculous cures. In several instances, medical testimony as to facts, and highly expert medical opinion, carefully given on oath, reduced to a minimum the value of this evidence, or explained it away."

"I do not, however, find as a fact that no one of these women was benefitted by the treatment. I do find that (though I am inclined to believe that Mr. Garling, Mrs. Moore and Nurse Ricketts have not, or had not before the hearing, grasped the truth, and were acting in all good faith) the whole thing is an ingenious money-making fraud, presumably the invention of Dr. (?) Coonley." . . . "The object of their use is to work on the imagination of women, by showing them the wonderful accuracy of the prediction—with a lying explanation made in the advertisement—of the statements in the pamphlet of which it is the compendium. Still, I think it is not unlikely that the use of these pessaries may actually have proved beneficial, accidentally, in effect. In many cases, especially where the patient was of a neurotic temperament . . . the belief that the diseased-looking matter which the primarily injurious action of the pessaries had brought away was the origin of the trouble thus got rid of, so reassured the patient that—as in faith-healing generally—she, believing herself cured, or on the way to cure, and substituting healthy hope for morbid introspection, became sound in function as in mind."

"The capsules are distinctly bad in their immediate action, and their general indiscriminate use is dangerous, physically and morally. Their use, applied to the therapeutic treatment of vitally sensitive and important organs, without expert diagnosis or advice, is in the fullest sense indiscriminate." After referring to the question of the constituents of the herbal drugs, he stated:—"These proceedings leave, as the only reasonable inference, the conclusion that the formulæ contain nothing of importance to promote the character of the compounds."

"It was also stated that the pamphlet itself is to be withdrawn, and a totally new one substituted. However this

may be, it is the present condition of affairs that I must take cognizance of. And the present state of things is that one injurious and objectionable nostrum, the sheet anchor of the whole concern, another less important but quite ineffective for any purpose, and several others that may or may not have some small value, are being sold at a large profit by means of false representation as to their value and efficiency, to the loss and danger of the public. If this be so, then the fact that, accidentally and incidentally, benefit has accrued to some, principally because of their faith, leaves the evil no less an evil to the people generally."

"I may add that it has not been contended, and I do not find that the intention of the appellant was or is to put any of these things off as abortifacient, or that any of them or any combination of them, if used as directed, would probably be effective for that purpose, but seeing that they are, in effect, sold in the open market, subject to no control or supervision by any qualified expert, and considering their peculiar nature, and especially the peculiar function of the capsules, I think it very probable that the original deviser of the scheme looked to their use for such purpose as a valuable element of profit in his sale. And it is highly probable that they have been purchased and used with that object. If, as the medical evidence explains, their action on the uterus, induced sympathetically by their stimulation or excitation of the vagina were enough to provoke expulsion, from or through the uterus, of morbid growths, then such action would certainly in cases of pregnancy—with pain rendered abnormally severe by both their escharotic and astringent effect on the vagina—be abortifacient."

"Acting on the conclusions at which I have arrived, I confirm the recommendation made by the Board of Health, but I vary the date from September 14, 1914, to February 28, 1915."

Hospitals.

THE QUEEN'S MEMORIAL INFECTIOUS DISEASES HOSPITAL.

The Annual Report of the Medical Superintendent of the Queen's Memorial Infectious Diseases Hospital, Melbourne, for the year ending September 30, 1914, has been issued early in January of the present year, and is now available for analysis. The total number of patients admitted to the hospital during the twelve months was 1,761, as compared with 1,773 in the previous year. Of these, 1,524 were suffering from diphtheria, 124 were suffering from scarlatina, 50 from pharyngitis, 39 from morbilli, 8 from laryngitis, 4 from infected fingers, 3 from pneumonia, 2 from appendicitis, and 1 each from enteric fever and burns. In 5 cases, the patients were under observation for a suspected illness, which proved to be non-existent.

Turning to the diphtheria cases, it appears that the disease terminated fatally in 108 patients. In 18, death occurred within 24 hours of admission. The case mortality was therefore 5.01%, or if the patients dying within 24 hours of admission be eliminated, it was 3.23%. The age incidence was quite usual. In 642 cases the patients were between 5 and 10 years of age, in 291 they were under 5, in 289 they were between the ages of 10 and 15, and in 212 they were between 15 and 25. After 25 the age incidence diminished rapidly.

The mortality was 8.9% in children under 5 years of age, 6.5% in children between 5 and 10, 5.2% in adults between 35 and 45 years of age, 2.1% in children between 10 and 15, and 0.9% in young people between 15 and 25 years.

The mortality was higher the longer the patient had been ill before admission. The only exception was in patients who had been ill for 7 days. In other words, when antitoxin treatment was commenced within the first 24 hours of illness, the mortality was very low (0.75%), when it was started after 2 days it was 2.84%, after 3 days it was 5.79%, after 4 days it was 11.32%, after 6 days it was 16.13%, after 7 days it was 8.33%, and over 7 days it was 17.02%. The actual number of patients in whom the treatment was started later than the fifth day was comparatively small, and this may account for the irregular rate. If the three groups be taken together, the mortality for the cases in which treatment was begun later than the fifth day was 14%.

Some interesting figures are given in regard to the situation of the local infection. The vast majority of the cases were faucial (1,123). The mortality in these cases was 0.5%, and the average amount of anti-toxin used per patient was 6,821 units. In 35 cases, the diphtheria was laryngeal; the mortality in this group was 11.4%, and the average amount of anti-toxin per patient was 18,571 units. Nasal diphtheria was met with 26 times, and the mortality was 11.5%. The average amount of anti-toxin per patient was 4,846 units. In the cases in which the forms were combined, the mortality was highest when the fauces and nasal cavity were affected, and lowest in those in which the fauces, nasal cavity and larynx were simultaneously affected. In both combinations, large amounts of anti-toxin were administered (25,000 and 22,000 units respectively). The medical superintendent deduces from these figures that since nearly "all cases of diphtheria are primarly faucial the early injection of a moderate dose of anti-toxin would result in a vast saving of lives and money." In addition, we gather from the table that nasal diphtheria is diagnosed at a later stage than faucial diphtheria, since there were 26 uncomplicated cases. Further, the fact that 6 of the 1,123 patients affected with pure faucial diphtheria died indicates that at times a large dose may be necessary for an apparently simple case.

The figures given in a table dealing with the classification of cases of laryngeal diphtheria are of less importance, inasmuch as it is stated that in "many" of the patients, morbilli was concurrent. Intubation was performed 57 times, and mortality was 17.5%, while tracheotomy was performed six times and the mortality was 50%.

The complications and sequelæ of the diphtheria cases are given in a special table. Albuminuria heads the list (395 times), non-suppurative adenitis comes next (267 times), "serum sickness" is third (237 times), and marked cardiac weakness is fourth (183 times). The other complications and sequelæ in the order of frequency were: Paralysis of the palate, total otitis, single otitis media, petechial rash, profuse hæmorrhage, tonsillitis of convalescence, morbilli, double otitis media, gastro-enteritis and colitis, ocular paralysis, pneumonia and broncho-pneumonia, septicæmia, peripheral paralysis, bronchitis, pharangeal paralysis, epilepsy, respiratory paralysis, serum abscess, pertussis, suppurative adenitis, hæmaturia, erysipelas, chorea, varicella, nephritis, scabies, ringworm, burns, and tubercular knee.

The incidence of scarlatina was greatest between the ages of 5 and 10 years (45 cases). Twenty-eight cases occurred in children under 5, 23 in young people between 15 and 25 years, 17 in children between 10 and 15, and 11 in adults between 25 and 35 years of age. The only fatalities affected infants under 5 years (2 cases). This represents a mortality of 1.66%.

In 19 cases, scarlet fever was complicating diphtheria, in one it was associated with morbilli and in one with pertussis. The most frequent sequelæ were simple adenitis, albuminuria, otitis media, and suppurative adenitis.

The age incidence of morbilli stands in contrast to that of diphtheria and scarlatina. In twenty-two cases, the patient was between 15 and 25 years of age, in 8 the patients were under 5, in 6 they were between 25 and 35 years, and in 1 each they were between 5 and 10 and between 35 and 45 years respectively.

The report contains other information of minor importance.

Public Health.

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, for the week ended February 25, 1915:—

Area.	Diphtheria.		Scarlet Fever.		Enteric Fever.		Pulmonary Tuberculosis.	
	Cs.	D'ths.	Cs.	D'ths.	Cs.	D'ths.	Cs.	D'ths.
Metropolitan	37	—	3	—	6	—	20	3
Rest of State	47	1	1	—	36	2	8	5
Whole State	84	1	4	—	42	2	28	8

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, for the week ended February 27, 1915:—

Diseases.	Cases.
Enteric Fever	30
Diphtheria	28
Pulmonary Tuberculosis	11
Scarlet Fever	9
Infantile Paralysis	8
Varicella	2
Total	88

SMALL-POX IN NEW SOUTH WALES.

The number of small-pox cases reported to the Department of Public Health, New South Wales, during the week ending March 7, 1915, was:—

	Cases.
City of Sydney and Metropolitan District	2
Country—	
Kurri Kurri	1
Weston	2
Cessnock	2
Total	7

THE HEALTH OF WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia:—

For the week ended January 9, 1915.

Town.	Enteric Fever.	Diphtheria.	Scarlet Fever.	Pulmonary Tuberculosis.	Beri Beri.
Fremantle	1	1	—	—	—
Fremantle East	—	1	—	—	—
Cottesloe Beach	—	1	—	—	—
Claremont	—	1	—	1	—
Subiaco	—	—	—	1	—
Leederville	—	—	—	2	—
Perth	2	2	—	3	—
Bayswater	1	1	—	—	—
Midland Junct'n	—	1	—	1	—
Yarloop	1	—	—	—	—
Kalgoorlie	3	—	—	—	—
Boulder	2	—	—	1	—
Yilliminning	1	—	—	—	—
Broome	—	—	—	—	1
Wickepin	1	—	—	—	—
Narrogin	1	3	—	—	—
Geraldton	2	—	—	—	—
Mundaring	—	1	—	—	—
Mount Lawley	—	1	—	—	—
Bunbury	—	—	—	1	—
Rockingham	—	1	—	—	—
Norseman	—	3	1	—	—
Yilgarn	—	—	—	1	—
Wanneroo	—	—	—	1	—
Holyoake	1	—	—	—	—
Totals	16	17	1	12	1

For the week ended January 16, 1915.

Town.	Enteric Fever.	Diphtheria.	Pulmonary Tuberculosis.	Beri Beri.	Erysipelas.
Fremantle	1	—	—	—	—
Melville	1	—	—	—	—
Claremont	1	2	—	—	—
Subiaco	—	1	—	—	—
Leederville	3	—	—	—	—
Perth	3	3	3	—	—
Perth North	1	1	—	—	—
Maylands	—	1	—	—	—
Bayswater	1	—	—	—	—
Midland Junct'n	1	—	—	—	—
Victoria Park	2	1	—	—	—
Kalgoorlie	2	—	2	—	—
Boulder	—	—	1	—	—
Coolgardie	1	—	—	—	—
Mt. Lawley	1	1	—	—	—
Collie	—	1	1	—	—
Geraldton	—	—	—	—	—
Dwellingup	—	1	—	—	—
Leonora	1	—	—	—	—
Broome	—	—	—	2	1
Berring, via Goomalling	—	1	—	—	—
Meekatharra	2	—	—	—	—
Totals	21	13	7	2	1

For the week ended January 23, 1915.

Town.	Enteric Fever.	Diphtheria.	Scarlet Fever.	Pulmonary Tuberculosis.	Puerperal Fever.
Fremantle	2	—	—	1	1
Fremantle Nth.	1	—	1	—	—
Cottesloe	—	2	—	—	—
Claremont	—	—	—	1	—
Subiaco	2	1	—	—	—
Leederville	1	—	—	—	—
Perth	3	1	—	1	—
Bayswater	1	—	—	—	—
Victoria Park	1	—	—	—	—
Carnarvon	1	—	—	—	—
Kalgoorlie	2	—	—	—	—
Boulder	—	2	—	1	—
Coolgardie	—	3	—	—	—
Meekatharra	3	—	—	—	—
Sawyers Valley	1	—	—	—	—
Mt. Lawley	1	—	—	—	—
Goomalling	1	—	—	—	—
Norseman	—	1	—	—	—
Yilliminning	—	1	—	—	—
Armadale	—	1	—	—	—
Parkerville	1	—	—	—	—
Jarrahdale	—	—	—	1	—
Blackboy Hill	2	—	—	—	—
Kurrawang	1	—	—	—	—
Cue	—	2	—	—	—
Berring, via Goomalling	—	1	—	—	—
Totals	24	15	1	5	1

For the week ended January 30, 1915.

Town.	Enteric Fever.	Diphtheria.	Scarlet Fever.	Pulmonary Tuberculosis.	Beri Beri.
Fremantle	1	1	—	1	—
Fremantle Nth.	—	—	—	1	—
Cottesloe Beach	1	—	—	—	—
Claremont	—	1	—	—	—
Subiaco	1	3	—	—	—
Leederville	—	1	—	—	—
Perth	1	2	—	1	—
Perth North	—	—	1	1	—
Maylands	—	—	—	1	—
Midland Junct'n	—	1	—	—	—
Queen's Park	—	1	—	—	—
Kalgoorlie	—	2	—	—	—
Boulder	—	2	—	2	—
Coolgardie	—	3	—	—	—
Northam	—	1	—	—	—
Norseman	1	2	—	—	—
York	—	1	—	—	—
Lawlers	1	—	—	—	—
Jolimont	1	—	—	—	—
Kellerberrin	—	—	—	1	—
Leonora	—	—	—	1	—
Broome	—	—	—	—	3
Berring	—	1	—	—	—
Meekatharra	1	—	—	—	—
Totals	8	22	1	9	3

For the week ended February 6, 1915.

Town.	Enteric Fever.	Diphtheria.	Scarlet Fever.	Pulmonary Tuberculosis.	Erysipelas.
Fremantle ..	2	1	—	—	1
Fremantle Nth.	2	—	—	—	—
Cottesloe ..	1	1	—	—	—
Perth	1	1	1	1	—
Perth North ..	—	1	—	—	—
Maylands ..	1	—	—	—	—
Kalgoorlie ..	1	—	—	1	—
Broome . ..	1	—	—	—	—
Kanowna ..	—	—	—	1	—
Balingup ..	—	—	—	1	—
Holyoake ..	1	—	—	—	—
Narrogin ..	—	1	—	—	1
Geraldton ..	1	—	—	—	—
Busselton ..	—	—	—	1	—
Pipe Track, Northam ..	1	—	—	—	—
Black Boy Hill	—	2	—	—	—
Kurrawang ..	1	—	—	—	—
Norseman ..	—	2	—	—	—
Meekatharra .	1	—	—	—	—
Totals ..	14	9	1	5	2

Naval and Military News.

We are informed officially that the following Sydney graduates have been accepted by the authorities for service with the R.A.M.C., and have left Melbourne by the "Medina," on March 9, 1915, for England: Drs. D. F. Finlay, L. J. J. Nye, W. Edwards, G. D. Waldron, O. Barton, A. Roberts, W. E. Gibbin, J. M. Jamieson, and J. W. Farrar.

In the *Commonwealth Gazette* of March 6, 1915, it is announced that Colonel C. F. Ryan, V.D., Assistant Director of Medical Services (1st Australian Division), has been transferred for duty to Headquarters of the Australian and New Zealand Army Corps. He will continue in the position of Assistant Director. The appointment of Lieutenant-Colonel N. R. Howse, V.C., as Assistant Director of Medical Services (1st Australian Division) is announced. He has been granted the rank of Colonel whilst so employed.

The following appointments have also been gazetted:—

1st Military District.

Australian Army Medical Corps—

Egmont Theodor Carl Schmidt and Jack Morlet to be Captains (provisionally and temporarily).

Captain (provisional) A. M. McIntosh to be temporary Major and Principal Medical Officer (temporarily), *vice* Major D. G. Croll, seconded from the appointment for duty with the Australian Imperial Force.

2nd Military District.

Australian Army Medical Corps—

Walter Jaques Stack, Gother Robert Carlisle Clarke, and Athol Walter Mobbs to be Captains (provisionally and temporarily).

The transfer of Major C. A. Edwards from Australian Army Medical Corps Reserve, which appeared in *Commonwealth of Australia Gazette* No. 101, of 19th December, 1914, is withdrawn.

Australian Army Medical Corps Reserve—

Francis Henry Furnival to be Honorary Captain.

Honorary Captains W. R. C. Beeston and A. R. Heupt are transferred to Australian Army Medical Corps, and to be Captains (provisionally and temporarily).

3rd Military District.

Australian Army Medical Corps Reserve—

Harold Robert Catford to be Honorary Captain.

Whitfield De Witt Henty to be Honorary Captain.

4th Military District.

Australian Army Medical Corps—

Majors H. H. E. Russell and M. H. Downey to be Lieutenant-Colonels.

Australian Army Medical Corps Reserve—

The appointment of Honorary Captain W. H. Godby, which appeared in *Commonwealth of Australia Gazette* No. 4, of 16th January, 1915, is withdrawn.

5th Military District.

Australian Army Medical Corps Reserve—

Alexander Goldstein to be Honorary Captain.

Army Medical Corps.

To be Captains—

Captain J. K. Adey, Australian Army Medical Corps.

William Gillbee Brown.

Philip Alan Maplestone.

Harry Franklyn Green.

It is reported that six scholarships will be instituted for medical students desirous and capable of studying tropical diseases at the Australian Institute of Tropical Medicine, at Townsville, under Dr. A. Breinl. The scholarships will be worth £75 each. Candidates will be selected from the Universities of Melbourne, Sydney, or Adelaide. Previous bacteriological and protozoological training will be taken into consideration in the appointments.

An inquest was held at Dunedin on February 22, 1915, into the cause of death of Dr. J. B. Thomson. The deceased was 46 years of age, and had been suffering from depression and insomnia. He was found strangled by a handkerchief attached to the bed post on the morning of February 19. A verdict of suicide during temporary insanity was returned.

Correspondence.

THE COMPLICATIONS OF PERTUSSIS.

Sir,—I think the cases of this disease recorded in this week's issue by Dr. De Garis must be regarded as exceptional, and of unusual rarity. These complications do not appear to be mentioned in Holt's classic work, although it is noted that severe emphysema produced by the paroxysms of severe coughing may cause asphyxia. In my experience, the most common complication to be watched for is deficiency of the urinary secretion and nephritis. I find that when the urine is scanty the disease is always more severe, and the paroxysms more distressing. It is my custom to warn the mothers, at my first visit, to observe carefully the amount of urine passed by the child daily, to report at once if the quantity diminishes, and to submit a specimen for testing twice weekly, if the child is old enough to make that practicable. Several times I have been sent for to see a case of pertussis for the first time, in consequence of the child having become drowsy and stupid, and on enquiry have found that the excretion of urine had almost ceased. Holt states that in 86 cases of pertussis in which the urine was tested, albumin was found in no less than 66, and in some cases there were hyaline casts. I therefore always include a diuretic in any mixture given for this complaint. There is no mention of the treatment employed in these cases, and it would be interesting to know whether the pertussis vaccines were used, and, if so, whether they proved of value. I have been using the Parke, Davies & Co.'s vaccines in every case since they were first issued, and have found them uniformly beneficial. The earlier doses were not strong enough, but this was soon remedied, and the general result is that it reduces the duration of the disease, from three or four months to the same number of weeks, at the same time modifying the severity of the spasms and other symptoms to a marked degree. The usual cry of the harassed mothers that they "cannot get any sleep owing to the children's cough at night" is heard no longer, and the improvement commences at once. I give a full dose every five days, and six doses completes the cure. The mortality rate of 50% recorded in the paper is not excessive, considering the age of the children and their nationality. Holt gives the average mortality of infants under 12 months in public institutions at the same figure.

I am, etc.,

A. G. CRIBB.

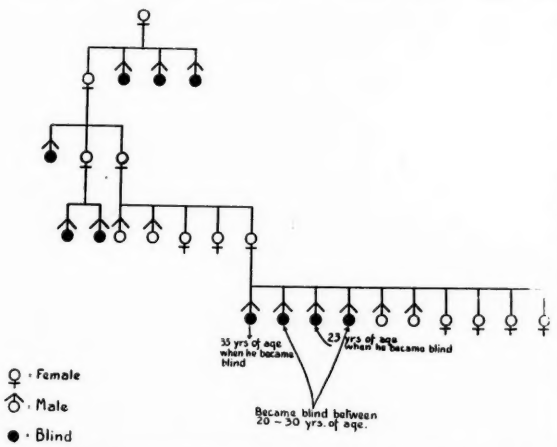
"Highbury," Millthorpe, N.S.W.,
March 8, 1915.

LEBER'S DISEASE.

Sir,—I have read with pleasure Dr. Pockley's interesting paper on that hereditary eye disease known as "Leber's disease." If, as Dr. Pockley says, comparatively few cases are recorded in Australian literature, I doubt whether the real reason of this is the extreme rarity of the disease.

At any rate, in Tasmania I have seen over a dozen cases, and from hear-say evidence suspect the existence of a good many more.

I append charts of the family trees of two families, several of the members of which I have examined and found suffering from the disease. I have seen other cases, but have not been able to chart the family trees. The late



Mr. Edward Nettleship, by whose lamented death ophthalmology has lost so great an ornament, has dealt so fully with hereditary optic atrophy in his Barman's lecture and elsewhere, that perhaps others like myself have not troubled to publish cases.

Nettleship was able to analyse over 500 cases, and his summary is most interesting. Unfortunately, in Australia, we are often unable to trace the family histories as carefully as in Europe.

Yours, etc.,

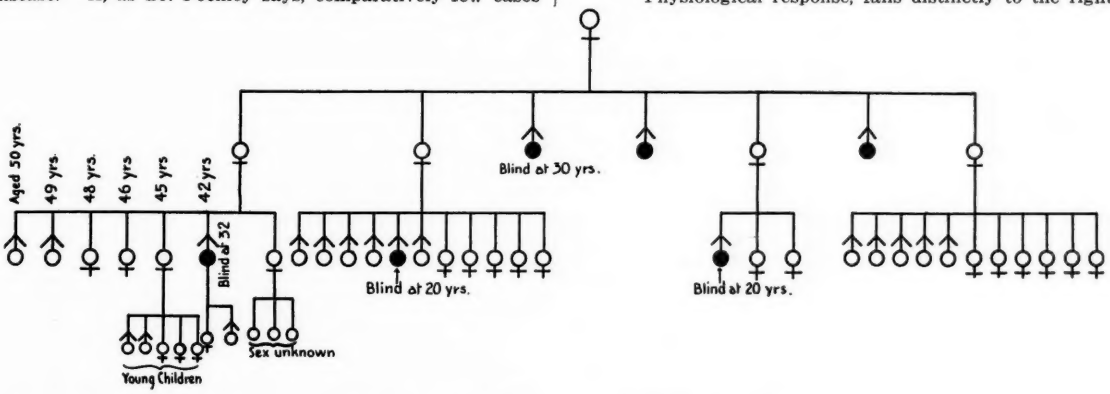
G. H. HOGG.

"Traon-Elorn," 37 Brisbane Street, Launceston,
March 1, 1915.

A CORRECTION.

Sir,—In reporting a case of auditory nerve tumour in your issue of February 27, 1915, I have made a mistake in reference to the caloric test that will be apparent to those interested, and which, if uncorrected, will discredit the value of the report. As spontaneous nystagmus was present, it should read "no alteration in nystagmus." My note, which I elaborated for publication, runs as follows:—

Caloric—118° F. to right ear—Nil; 118° F. to left ear—Physiological response, falls distinctly to the right.



Cold to the right ear—Nil.

Cold to the left ear—Physiological response. Falls to the left.

My custom is to consider a vestibule inactive if there is no response after using twelve ounces of water.

One could quickly determine in this case that the right ear was functionless, the caloric test was directed to proving that the vermis was intact, as was evidenced by definite alterations in the existing equilibrium when the left vestibule was over-stimulated.

I am, etc.,

R. E. SHUTER.

Melbourne,
March 3, 1915.

Personal.

Dr. J. Inglis Robertson has commenced practice at "Meringa," Molesworth Street, Lismore, New South Wales, having taken over the practice of Dr. O. R. P. Müller.

Dr. Basil Kilvington, of Camberwell, Victoria, has disposed of his practice to Dr. W. Spalding Laurie, and is now only practising at 131 Collins Street, Melbourne.

Dr. M. A. Reid has resumed practice at 127 Collins Street, Melbourne.

Dr. A. Saw has resumed practice at 242 St. George's Terrace, Perth, Western Australia.

Medical Appointments.

Dr. T. A. Price has been appointed Honorary Surgeon in the Ear, Nose and Throat Department of the Toowoomba Hospital.

Dr. D. G. Hunter has been appointed Honorary Visiting Medical Officer to Denistone House Convalescent Hospital for Men, Eastwood, New South Wales.

Dr. W. H. Low has been appointed Government Medical Officer at Greta, New South Wales.

Dr. E. M. Smith has been appointed Government Medical Officer at Port Macquarie, New South Wales.

Dr. Norman Dowling has been appointed Visiting Surgeon to the Gaol at Young, New South Wales, in the place of the late Dr. Maclennan.

Dr. Edward Kinmont has been appointed Medical Officer to the Destitute Persons and State Children's Departments and Surgeon to the Adelaide Gaol, in place of Dr. Morris.

Dr. W. A. Hunter has been appointed Medical Officer at Yatala Prison, in place of Dr. Morris.

Dr. E. W. Morris has been appointed member of the South Australian Medical Board.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenens sought, etc., see "Advertiser," page xiii.

Kalgoorlie-Port Augusta Railway, Medical Officer.

North Sydney Baby Clinics, Honorary Medical Officer.

Queen's Memorial Infectious Diseases Hospital, Senior Medical Assistant and Medical Assistant.

Medical Journal of Australia, Assistant (part-time).

Books Received.

MODERN SURGERY: GENERAL AND OPERATIVE, by J. Chalmers Da Costa, M.D.; Seventh Edition, revised, enlarged and re-set, 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street; 8vo., pp. 1515, with 1085 illustrations. Price, 25s.

THE CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL, CHICAGO, Vols. I., II., III., IV. and V., 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street; 8vo., pp. 1., 190; II., 213; III., 213; IV., 254; and V., 190. Annual subscription, 35s.

CLINICAL HEMATOLOGY: AN INTRODUCTION TO THE CLINICAL STUDY OF THE SO-CALLED BLOOD DISEASES AND OF ALLIED DISORDERS, by Gordon R. Ward, M.D., 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street; 8vo., pp. 395, illustrated. Price, 15s.

MANUAL OF OBSTETRICS, by Edward P. Davis, A.M., M.D., 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street; demy 8vo., pp. 463, with 171 illustrations. Price, 10s.

A TREATISE ON CLINICAL MEDICINE, by William Hanna Thomson, M.D., LL.D., 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street; 8vo., pp. 667. Price, 25s.

CRILE AND LOWER'S ANOCI-ASSOCIATION, by George W. Crile, M.D., and William Lower, M.D., 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street; 8vo., pp. 259, with illustrations. Price, 15s 1d.

COLLECTED PAPERS BY THE STAFF OF THE ST. MARY'S HOSPITAL (MAYO CLINIC) FOR 1913, 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street; 8vo., pp. 819, 335 illustrations. Price, 24s.

LOCAL AND REGIONAL ANÆSTHESIA, INCLUDING ANALGESIA, by Carroll W. Allen, M.D., with an introduction by Rudolph Matas, M.D., 1914. Philadelphia and London: W. B. Saunders Company; Melbourne, James Little, Collins-street; 8vo., pp. 625, with 255 illustrations. Price, 25s.

DISEASES OF THE SKIN, FOR THE USE OF ADVANCED STUDENTS AND PRACTITIONERS, by Henry W. Stelwagon, M.D., Ph.D., Seventh Edition, revised, 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street; 8vo., pp. 1250, with 334 text illustrations, and 33 full page coloured and half-tone plates. Price, 25s.

THE PRACTICE OF PAEDIATRICS, by Charles Gilmore Kerley, M.D., 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street; 8vo., pp. 878, with 139 illustrations. Price, 25s.

ABDOMINAL OPERATIONS, by Sir Berkeley Moynihan, M.S., F.R.C.S., Third Edition, two volumes, enlarged, 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street: 8vo., Vol. I., pp. 488; Vol. II., 492. Price, 44s. net.

SEROLOGY OF NERVOUS AND MENTAL DISEASES, by D. M. Kaplan, M.D., 1914. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little, Collins-street; 8vo., pp. 346. Price, 15s.

Diary for the Month.

Mar. 16.—New South Wales Branch, B.M.A., Executive and Finance Committee; Ethics Committee.

Mar. 17.—New South Wales Branch, B.M.A., Western Suburbs Medical Association.

Mar. 17.—Victorian Branch B.M.A., Clinical Meeting.

Mar. 17.—Western Suburbs Medical Association, General Meeting.

Mar. 19.—Queensland Branch B.M.A., Council Meeting.

Mar. 24.—Annual Meeting, Central Western Medical Association, Newcastle.

Mar. 25.—South Australian Branch, B.M.A., Monthly Meeting.

Mar. 25.—New South Wales Branch, B.M.A., Return of Ballot Papers for Election of Council of N.S.W. Branch.

Mar. 26.—New South Wales Branch, B.M.A., Annual Meeting.

Mar. 26.—Melbourne Hospital Clinical Society.

Mar. 30.—New South Wales Branch, B.M.A., Council; Executive and Finance Committee; Ethics Committee; Organization and Science Committee; Medical Politics Committee meetings.

Mar. 30.—Victorian Branch B.M.A., Eye and Ear Section.

Mar. 31.—Victorian Branch B.M.A., Council Meeting.

Covers for binding the *Medical Journal of Australia* for 1914 can be obtained on application to the Manager, B.M.A. Building, 30-34 Elizabeth Street, Sydney. The price of a cloth cover is 2s. and of half leather 3s. 6d.

Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).	Brisbane United F.S. Institute. F.S. Lodges at Longreach. F.S. Lodges at Warwick.
WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth).	Swan District Medical Officer. All Contract Practice Appointments in W.A.
NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney).	Australian Natives Association. Balmain United F.S. Dispensary. Burwood District F.S. Institute. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney. N.S.W. Ambulance Association and Transport Brigade. N. Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Braidwood. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Mudgee. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, and Auburn. F.S. Lodges at Wellington. Killingworth Colliery, Newcastle. Seaham Colliery No. 1, Newcastle. Seaham Colliery No. 2, Newcastle. West Wallsend Colliery, Wallsend.
SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide).	The F.S. Medical Assoc. Incorp., Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to the "Medical Journal of Australia" alone, unless the contrary be stated.

All communications should be addressed to "The Editor," "Medical Journal of Australia," B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.

The following periodicals are required by the Librarian of the New South Wales Branch of the British Medical Association to complete the series for binding. Members who have borrowed these journals are requested to return them as soon as possible.

Lancet, November 7, 1914.
Lancet, November 14, 1914.